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"THE TIMES" OF THE TRANSPORT WORLD

BRAKES
FOR
NEW
ZEALAND

See Page 7

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The Locomotive Industry

PROPOSING "The Institution of Locomotive Engineers" at that body's annual luncheon, which holds such a high place in the affections of the railway industry, Dr. Charles Hill, Chancellor of the Duchy of Lancaster, referred to the superb achievements of British locomotive engineers over a century or more and the remarkable effort of railway development throughout the world which arose from British invention and enterprise. The pioneers had worthy successors today and the film of the industry prepared jointly by the Locomotive and Allied Manufacturers Association and the Central Office of Information was a grand retort to those who thought we were resting on our laurels. We had plenty to offer the countries of the world and locomotive manufacturers, who exported a thousand units worth £20 million in the last two years, were making intense efforts. We were also sending technical experts to under-developed countries, where there was a hunger for know-how. There were 40,000 overseas students here at present. In his reply, Mr. R. A. Smeddle, president, said we were beginning to overcome the deferred maintenance which had held our railways back since the war. They were glad to have with them Sir Brian Robertson who had so much to do with the modernisation plan and with carrying it out so quickly. As a result of overseas studies we were getting new stations, new rolling stock and new marshalling yards. Modernisation was beginning to show its effect and with sound technical foundations what we were doing was bound to interest other countries; foreign railway representatives would come to see what our railways and manufacturers were doing, for railway exports were vital to the country. As to the Institution, membership was well past the 2,000 mark; papers were taking on a modern flavour; and the summer meeting in Germany was meeting with overwhelming support. A symposium of a dozen papers was being given in May on aluminium in railway transport.

Modernisation and the Shop Window

IN replying to the toast of "The Guests," proposed by Mr. R. Arbuthnott, Sir Brian Robertson said it was important that the manufacturing and operating sides of an institution such as that should exchange ideas. The majority of men in the room were apprenticed in the art of the steam engine, but had been able to switch over to other motive power in a short time and make themselves the equal of any in the world. He hoped that modernisation would continue to receive the support of the Government and would be carried through quickly as a co-ordinated scheme. It was in the interest of railway finances and it would make our railways a better shop window for the export industry. The British Transport Commission would continue to make the time of its officers available for consultation abroad and to train students. Where else in the world could you find such a good opportunity for comparison between diesel-electric and diesel-hydraulic operation? In the autumn we were holding an electric traction conference and from mid-1960 to mid-1961 would be a year of really important electric traction achievements, which would also see introduction of new diesel-electric train sets and the doubling, to 900, of the number of main-line diesel locomotives. New equipment on this scale had never been introduced in any country in the world. Our main-line diesel locomotives had gone into service with remarkably little trouble; what had been experienced had been mainly with ancillary equipment. The luncheon concluded with the introduction by the president of Mr. D. C. Brown, president-elect for the year in which the Institution reaches its 50th birthday.

L.M. Tasks

SAIID Lord Rusholme, chairman of the London Midland Area Board, at a Guildhall luncheon in the City of London last week: "There are those I know who hold the opinion that British Railways is a rapidly running down concern. It has frankly surprised me when in conversation

with thinking men to hear occasionally such views expressed. Here are some of the facts of life." The London Midland Region of British Railways is, he continued, in fact, now busier with freight traffic than before the war, and its passenger business is as buoyant as ever. Passengers join some five to six thousand London Midland trains at the rate of 400 a minute and freight is loaded on to some 2,500 trains at the rate of 130 tons a minute 24 hours a day throughout the year. From these and other services our gross receipts are of an order of £140 million a year.

railway modernisation were having a very real effect on business. The B.T.C. still had to reap the major benefits of railway modernisation. "For instance, we must wait until 1964 before we shall be able to travel over the first rail trunk route ever to be electrified in this country, that between London, Birmingham, Crewe, Manchester and Liverpool, although there will be a foretaste later this year when the Manchester-Crewe section is opened. Although it is not yet in our programme, I hope that I may live long enough to see the first electrically

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"We are in fact today the most important freight operators in the country. Since public confidence in the reliability of our freight services is of such moment to us, the London Midland was the first to publish a freight train timetable which, growing month by month, now comprises 600 of our express freight train services nightly. Jointly with its colleagues in Scotland the London Midland Region runs every night the fastest freight train and door-to-door service in the country—the *Condor*—which operates from London to Glasgow in 10 hours with absolute reliability. The London Midland Region was, also, the first to conclude a comprehensive reappraisal of the location, construction and layout of a new chain of highly mechanised freight terminals designed, in conjunction with road collection and delivery services, to speed transits, to reduce costs and to move away from the inheritance of a manifold system of small and uneconomic depots."

The Turning Point

WHEN dining with the Timber Trade Federation last week Sir Brian Robertson, chairman of the British Transport Commission, also spoke on traffic levels. He said that 1960 might well prove to be the turning point in the affairs of British Railways. It had taken the railways some time to recover from the 1958 recession in the heavy industries. That recession cost them some £30 million, a loss which nevertheless served to underline the inherently strong position of the railways as mass movers of the nation's raw materials, and it was not until the latter part of last year that its effects were finally thrown off. At the end of the year, in fact, traffic figures began at last to climb; that trend had been maintained. "Of course we lost some business due to the recent threat of a strike. The impression I am getting, I am glad to say, is that we are getting most of it back. If the strike had occurred, we should undoubtedly have lost much of it for good, because once a firm has acquired its own transport fleet and transport manager to run it, the public haulier, rail or road, has an uphill job to get the business back." As it is, buoyant trade conditions and the growing impetus of

hailed train leave Euston for Glasgow Central." A series of smaller electrification schemes would be completed and come into service during this year and the succeeding three years. Meanwhile there would be a big increase in diesel traction, especially on the Eastern and Western Regions, in the next 12 months.

The Good Work Continues

SINCE it opened on August 31 last year the British Transport Staff College at Woking has been the subject of a number of references in our columns, the latest being in some detail in our issue of January 9. Having now paid three visits there we have been impressed increasingly by the obvious success of the work which is being carried on and the enthusiasm displayed by the members of the courses. It may perhaps be added here that those who participated in the first 16-week course demonstrated their appreciation most happily by the presentation of a handsome clock which is mounted above the fireplace in the lounge. A main purpose of any staff college should be to strengthen corporate spirit through personal relationships and mutual understanding and even though the British Transport Commission is in its 13th year there is still bound to be much to achieve in that regard between its various sections, and between sub-sections, such as the railway regions. In furtherance of this aim great care is taken in planning each course to ensure that each of the four syndicates into which the 28 members of the course are grouped has a comprehensive representation. Since the syndicates are reconstituted after each four-week session of the 16-week course it is possible for almost every member to work with and get to know every other member and to derive much benefit from mutual interchange of experience and background knowledge. Each syndicate is under the guidance of one of the four assistant directors of studies and so they, too, come into close contact with all the members and receive their opportunity to add polish to what, it is evident to us, is a most valuable training centre for higher-level staff in the transport industry.

Improving Engineering Conditions

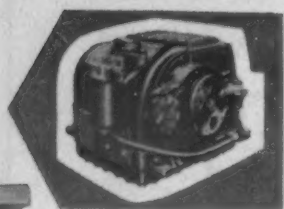
A NEW civil engineering central depot for the Bristol district is to be provided by British Railways Western Region at Ashton Gate. The new centre will cover the activities now carried on at the existing mechanics depot at Pylle Hill, the plant depot at St. Philip's Marsh and the bridge depots at Bath Spa and Bathampton. This latter site will, however, be retained for the stocking of heavy bridge material. The plan provides for a large concrete portal frame building with brick walls and a pitched roof to accommodate workshops and stores, served by a new rail siding and paved roads. Other smaller buildings containing offices and a messroom will be erected, together with a sawmill, cement store, plant store and a garage. In addition, there will be a stacking area of approximately 20,000 sq. ft. adjacent to two new sidings and paved roads. It is anticipated that concentration of the functions of the existing outlying depots at one central site will assist greatly the more efficient working of the district, as well as achieving economies in staff costs and improving considerably the actual working conditions of the staff.

Far from a Monopoly

WHEN the chairman of Coras Iompair Eireann, Dr. C. S. Andrews, addressed the Insurance Institute of Ireland in Dublin recently he took some trouble to emphasise that the common conception of C.I.E. as a transport monopoly was an illusion. "I myself think that if it had a monopoly it could give a much better and cheaper service to the public than it can at present give," he said. He doubted whether many of the firms operating fleets of lorries could justify them on economic grounds even in comparison with existing C.I.E. prices. A problem which had been faced with a fair measure of success had been that of persuading fleet owners of such facts. It was by no means a simple task and a recent survey had shown that, of the 2,600 lorries of two tons or greater capacity in County Dublin and the city, some 1,360 were engaged in work where a change to operation by his company was unlikely to bring any advantage. On the other hand the remainder could be so replaced and the traffic potential involved was put at £2 million annually. To persuade people to use public transport for personal travel was equally difficult, but there again C.I.E. had had some success and was hopeful of further improvement. It must, however, be emphasised that even if the undertaking was making a comfortable profit—its actual duty was rather to break even—it would still be entirely wrong to maintain uneconomic services where there was an obvious alternative means of providing equally good facilities at substantially lower costs.

Setting Out the Possibilities

FOR some time the Central Youth Employment Executive has been issuing its "Choice of Careers" series of booklets and these have already covered a range from accountancy to woollen and worsted yarn manufacture. The latest addition, *The Railways*, was published this week by H.M. Stationery Office (price 2s.) and it must be said that it covers the ground very thoroughly. The importance of training and experience is emphasised, and rightly so, but it may well be felt that there should have been stress laid upon the disadvantages of railway employment in the shape of shift work, the probable endurance for some years yet of barely tolerable working conditions at some places and the still relatively slow rate of promotion in some categories. While it is true that many have hankered at one time or another in their lives to become an engine driver, in this day and age the transport industry must depend to a considerable extent upon recruiting those who feel that it is almost a dedicated calling. Despite changes to come in conditions of employment on the railways this is useful as a concise guide to the would-be railwayman and, for that matter, to careers masters and the like.

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The Editor is prepared to consider contributions offered for publication in MODERN TRANSPORT, but intending contributors should first study the length and style of articles appearing in the paper and satisfy themselves that the topic with which they propose to deal is relevant to editorial requirements. In controversial subjects relating to all aspects of transport and traffic this newspaper offers a platform for independent comment and debate, its object being to encourage the provision of all forms of transport in the best interests of the community.

A Challenge that Must Be Met

AS a sociological study the Guillebaud report is of outstanding interest; never before has a pay inquiry on such a scale been attempted. It marks a departure from orthodoxy and may well create a precedent in the machinery of wages negotiations, with possibly undesirable implications: it is already being suggested that similar inquiries might be applied to the wages of farmworkers or London busmen. There can be no question, however, that the recent inquiry was fully justified as vindicating arguments that railwaymen were underpaid and their grade differentials inadequate. The recommended increases of 10 per cent for salaried and 8 per cent for wages staff, with still larger increases ranging up to 18 per cent for certain selected grades, roughly accord with estimates. The report admits to difficulty in finding comparable jobs in other industries, especially for skilled workers, for whom the proposed increased differentials were arrived at "without regard to outside comparisons." In this connection it is interesting to recall a passage in the report of the court of inquiry into railway wages in 1947, also under Mr. Guillebaud's chairmanship. This was to the effect that "the railways constitute a separate entity in the industrial system of the country and the conditions therein cannot be assimilated to those in any other individual industry." It is not surprising therefore that, particularly in assessing differentials, the facts relating to the job, rather than outside comparisons, should have guided the committee.

Prospects on the Railways

THE evident care with which railwaymen's duties were studied adds interest to this exceptional document and reveals the arduous and hazards of many of the tasks. But despite its hardships the railway service has its attractions. Career and promotion prospects for conciliation staff make the railways "unique among British industries," states the report. "The person entering railway service in the lowest grade has in many cases a wide variety of jobs open to him, if he has the capacity and ambition to seek promotion." In due course modernisation will increase the attractiveness of railway employment, and while promotion opportunities and career prospects vary widely between industries the report doubts if there is any other "which offers such a wide range of opportunity to a new recruit in the wage-earning grades." The railway service indeed holds opportunities for resourcefulness rarely found elsewhere; most railwaymen lead a fuller and more interesting life than can be gained on the factory floor, and this may explain their comparative reluctance to respond to latter-day attractions of higher pay and more settled hours in industry generally. Nevertheless, there can be no excuse for the continuance of a wages system which has not kept pace with industrial development and of differentials which have been adversely affected by a series of percentage wages increases reacting unfairly on the higher grades of the service. Hitherto, attempts at improvement have been bedevilled by an upsurge of inflation.

NEWS SUMMARY

REPORT of the Guillebaud committee of inquiry into railway wages and differentials was available last week; the railway trade unions, for whom, jointly with the B.T.C., it was prepared, have already indicated disagreement with rumoured Government policy that it should be implemented in three stages. The A.S.L.E.F. has suggested back dating awards to November, 1958.

London busmen's leaders have decided to call a delegate conference to review the stage reached in negotiating a pay claim with the London Transport Executive. No offer has been made but the claim for £1 a week has not been rejected. A large number of Central bus garages has, however, intimated an intention to ban overtime as from March 9, and Mr. A. Bull, a member of the Executive, has warned

A Re-adjusted Wages Structure

OF outstanding interest is the report's suggestion of a "radical re-adjustment" of the wages structure, whose revision is recommended to the joint consideration of the Commission and the unions. This would seem to be a matter of urgency, for there are at present 150 grades of manual workers to which are applicable more than 40 different rates of pay. Reduction to some 12 pay grades, as recommended, will no doubt be hotly contested, but should be possible with goodwill and if traditional notions can be discarded. A simplified structure should provide flexibility and in the long run lead to greater economy. The present system of grading is regarded as indefensible because of its "microscopic" steps and long overdue re-adjustment of differentials; the number of employees whose rates are "out of line" or "badly out of line" is stated to be nearly half the total of manual workers. Comparisons have been made on time rates alone, and not on average earnings which, it is said, would have shown at least as wide a disparity. A useful recommendation is that future negotiations for salaried employees' pay and conditions should be conducted separately from those for other workers so as to provide better opportunities for the discussion and resolution of the different problems of the two sections and to improve industrial relations. In announcing his executive's decision to welcome the report as a whole Mr. W. J. P. Webber, general secretary of the Transport Salaried Staffs Association, pointed to the advantages of separate negotiation. They had no complaint, he said, about the proposal for an organisation and methods survey of clerical work, as they had never opposed measures to increase efficiency in the industry.

Meeting the Cost

THE Commission has already shown an awareness of the unsatisfactory position regarding amenities such as provision for meals and rest rooms, to which the committee refers while commending the "excellent facilities" provided in some places as part of the modernisation plan. In fine, the report constitutes a challenge to the Government, and it must be met. Negotiations between B.T.C. and unions begin this week; implementation is estimated to entail between £40 million and £50 million a year, a figure which the Commission will be unable to bear until the full fruits of modernisation have been secured, despite satisfactory recent advances in traffic, including even coal traffic. The Commission must be assisted over the hurdles of the next few years, and it is entitled also to permanent relief from the burden of old and obsolete capital and from a fair proportion of its accumulated deficit, on loans to meet which, be it remembered, it is paying interest. For reasons previously stated in these columns the drastic writing off of old capital is economically justified. This measure would probably account for some £25 million a year, a figure big enough in itself but insufficient to tide over the period before modernisation comes into full swing. This extra need can only be met by a straight subsidy, which must be purely temporary, coupled with insistence upon, and methods to ensure, the most efficient management possible. But wild-cat schemes born of the fertile imagination of certain backbenchers must be avoided.

Avoiding Discouragement

THE amount of the subsidy must necessarily be affected by the degree of encouragement given to the Commission to set about pruning the railways and overcoming redundancy and the still greater freedom extended to it in the matter of competitive charges; all restrictions, including much of the control still exercised by the Transport Tribunal, should be removed. Some of the measures which might be taken we have already reviewed. The machinery for re-organisation exists; ruthless re-organisation would be stupid, unnecessary and discouraging. Some further decentralisation may be needed, but central control of traffic movement and its supervision commercially, on the lines proposed in our last issue, which proved so successful during the last war, deserve consideration. Responsibility for initiating measures to revitalise the railways now rests squarely with the Government, from which a preliminary statement, expected at any moment, is awaited with some anxiety. Most essential is a plain indication of its attitude to the Guillebaud report; on this there must be no hedging and no delay—it must go as far as negotiation between the B.T.C. and the unions take it as quickly as possible. As to the detailed plan for the railways, this must be carefully worked out, step by step, in consultation with the Commission. The subject is too vital to risk a recurrence of political blunders of the kind which have assailed the transport industry in the recent past.

busmen that the resulting irregular service is bound to cause a loss in traffic. Provincial company men have already had a pay claim rejected but negotiations with municipal operators are in progress.

Mr. Harold Wilson suggests to the Parliamentary Labour Party that the Government should acquire B.T.C. capital responsibilities and charge an operating rent for use of the assets.

The Leipzig spring fair has attracted many British industrial exhibitors—see page 12.

Laycock Engineering has a new depot at Bristol—see page 13.

A Scammell snowplough-gritter vehicle with Atkinson Agricultural Appliance bodywork for motorway use is described on page 13.

A new runway, first part of a four-stage plan to give Coventry a municipal airport suitable for international traffic, is to be begun at Baginton.

SCALES OF RAILWAY PAY

Report of Guillebaud Committee of Inquiry

INCREASES SUGGESTED BY INVESTIGATION

LAST Friday the report of the Railway Pay Committee of Inquiry, comprising Mr. C. W. Guillebaud, C.B.E. (chairman), Mr. E. Bishop, O.B.E., and Mr. H. A. Clegg, M.A., became available. We summarise the views of the committee, which has carried out an immense task with the aid of 10 skilled investigators and which recommends substantial increases in the rates of pay for most grades of railway employees. The committee was appointed by the British Transport Commission and the three railway unions (the parties) to conduct an inquiry into the relativity of railway pay in comparison with salaries and wages in other industries, and into the structure of salaries and wages in railway service. The terms of reference were:

"(a) To conduct an investigation into the relativity of pay of salaried and conciliation staff in British Railways covered by the machinery of negotiation for railway staff with the pay of staff

the effect of other conditions of employment upon the conclusion reached in Part II. Provisions in the railways and in outside industries covering hours of duty, overtime and weekend work, holidays, sick leave, superannuation contributions and benefits, career and promotion prospects, travelling facilities and security of employment, for both salaried staff and manual workers, are reviewed. Having considered the weight to be attached to all these various considerations we come to the following conclusions, says the committee:

(1) that, in the case of salaried staff the advantages of railway employment, approximately balance the disadvantages, and that, with certain exceptions, "to achieve a fair relativity with outside employment would involve an increase of approximately 10 per cent in the general level of salaries";

(2) that, in the case of conciliation grades, the balance rests on the side of the advantages of railway employment, and that, having had regard also to the wage structure of the railways and that of other industries, and that, "an increase of approxi-

A SALARY COMPARISON FOR RAILWAY CLERKS CLASS 4

Age	Railways	1	2	3	INDUSTRY	4	5	6	7	8	9	10	Median of other industries	Railways Deviation from Median	%
18	£18	£18	£18	£18	£18	£18	£18	£18	£18	£18	£18	£18	£18	-20.5	-6.4
19	318	305	300	287	280	285	280	314.6	297.5	325	352.3	329.4	305.0	-16.6	-4.9
20	336	335	330	312	315	315	335	352.3	329.4	352.3	380.0	365.0	340.5	+13.0	+3.7
21	352	370	360	337	345	375	350	380.0	365.0	385	419.9	403.5	385.0	+33.5	+9.0
22	370	400	405	367	375	455	385	419.9	403.5	455	455.8	481.6	432.5	+48.2	+10.7
23	387	430	435	392	400	475	415	439.4	432.5	495	450	457.6	461.3	+55.3	+13.6
24	406	465	465	428	425	495	450	457.6	461.3	515	475	455.8	481.6	+55.3	+13.6
25	428	495	495	461	450	515	475	455.8	481.6	540	505	494.0	489.2	+48.2	+10.7
26	451	585	525	491	480	540	505	494.0	489.2	565	530	512.2	521.1	+46.1	+9.7
27	475	560	555	535	500	565	530	512.2	521.1	590	555	530.4	542.7	+55.7	+11.2
28	497	595	585	565	525	600	555	530.4	542.7	600	550	548.6	570.0	+49.0	+9.4
29	521	600	600	600	600	600	580	588.9	592.5	600	580	588.9	592.5	+71.5	+13.7
Maximum reached at age	28	27	28	28	30	27	28	31							
Hours Per Week	Not to exceed 42	38	38	38	38	40½	38	Maximum 39							

in other nationalised industries, public services, and appropriate private undertakings, as agreed between the parties or on the instigation of the independent body, where reasonable and useful comparisons can be made, and, in relation to any such comparisons:

- to establish the degree of job comparability;
- to ascertain the rates of pay and such other emoluments of the jobs compared as may be properly taken into account and
- to take account of all such other factors as the body may consider relevant in assessing the comparability of the jobs.

(b) To present to the Commission and the three railway trade unions with as little delay as possible a report setting out objectively the ascertained facts, together with such general observations and conclusions as they may consider appropriate on matters within the terms of reference.

In conducting their examination the independent body will pay due regard to the existing railway wages and salaries structure and may draw attention to any feature of that structure which they consider should be brought to the notice of the parties."

Unprecedented Scale of Inquiry

In the introduction to the report an account of the way in which the body has conducted the inquiry is given. No investigation into relativity of pay has previously been carried out on any such scale; it has required the employment of a considerable staff, as well as much planning and revision of plans. This has been done in close consultation with a joint advisory committee consisting of senior representatives of the parties. The majority of the committee's staff were investigation officers, seconded from other undertakings, who have conducted detailed investigations into the exact nature of the work done by each railway grade

mately 8 per cent in the general level of rates would be involved if a fair relativity in relation to wage rates in outside industry were to be achieved."

Wage and Salary Structure

At the present time there are over 40 different rates of pay applicable to more than 150 grades of railway conciliation staff; and it is the committee's view that this wage structure needs radical simplification. It puts forward in Part IV for the consideration of the parties the suggestion that it might be replaced by a structure of some 12 wage grades, into which the present much larger number of wage grades might be merged.

With regard to the question of differentials, the view is put forward that the following groups of conciliation staff merit special treatment within the wage structure:

- (1) Permanent way staff (other than labourers).
- (2) Shunters and head shunters.
- (3) Passenger and goods guards.
- (4) Signals and telecommunications staff (other than labourers).
- (5) Signalmen.
- (6) Drivers and motormen (other than those engaged on shunting work).

For these six groups it is suggested that a differential of the order of 5 per cent, in addition to any general increase, might be appropriate; an exception is made of the senior grades of signalmen and signals and telecommunications staff, for whom the differential might be of the order of 10 per cent. We believe, says the committee, that these differentials could be provided within the framework of a simplified wage structure, and we have set out the manner in which we suggest that it could be done. In doing so we point out that it is an inevitable consequence of any merging of wage grades, that some of those we have not singled out for

RAILWAY CONCILIATION GRADES WAGE COMPARISON

Railway Wage	Railway Grade	Wage for comparable jobs in other industries	Deviation from Railway wage	Percentage
160s. 6d.		229s. 4d. (L)	+68s. 10d.	+42.9
		221s. 7d. (L)	+61s. 1d.	+38.1
		190s. 8d.	+30s. 2d.	+18.8
	Stores Issuer	185s. 0d.	+25s. 6d.	+15.3
	Storeman	184s. 3d.	+24s. 3d.	+14.8
	Assistant Installer	178s. 8d.	+18s. 9d.	+11.4
	Train Attendant	176s. 11d.	+16s. 11d.	+10.2
	Lengthman (maximum rate)	173s. 2d.	+13s. 2d.	+7.9
	Relayer (maximum rate)	172s. 10d. (L)	+12s. 4d.	+7.8
		168s. 8d.	+8s. 2d.	+5.0
168s. 0d.		217s. 8d. (L)	+48s. 8d.	+28.8
		196s. 4d.	+27s. 4d.	+16.2
		187s. 11d.	+18s. 11d.	+11.2
		187s. 10d.	+18s. 10d.	+11.1
	Senior Porter	186s. 9d.	+17s. 9d.	+10.5
	Capstanman	186s. 0d.	+17s. 9d.	+10.1
	Checker	185s. 8d.	+16s. 2d.	+9.6
	Private Car Driver	185s. 8d.	+16s. 2d.	+9.6
	Water Softening Plant Attendant	182s. 0d.	+13s. 0d.	+7.7
	Motor Driver (up to 5 tons)	178s. 0d.	+9s. 0d.	+5.3
		168s. 8d.	+8s. 2d.	+5.0

(L)=Reduced by amount of Railway London Weighting (3/-)

and by grades of workers in other industries, most of which were suggested by the joint advisory committee. In all, the officers submitted 2,200 separate reports. These reports were analysed and collated by the secretaries to the investigating body.

On the basis of the work of our investigation officers, says the report, and of our secretaries, we have reached agreement as to which jobs could be regarded as comparable with railway work; and in the case of those jobs which we have decided to be comparable, we compare the rates of pay with the corresponding railway rates. Wherever possible we have compared the rate for an individual railway job with the median of a group of rates paid for comparable work in other industries. We have also made overall comparisons with outside industry, of rates of pay for salaried staff as a whole and for conciliation grades as a whole.

These comparisons have led us to the conclusion that with certain exceptions both the salaries and the wages of railway workers are below those of workers, doing comparable jobs, by a margin of the order of 10 per cent. This general conclusion, which is based solely upon a comparison of rates of pay for comparable jobs in the railways and in outside industries, is subject to the considerations set out in Part III of our report, where we take into account the effect of other aspects of railway employment. It is also subject to the views we set out in Part IV of our report with regard to salary and wage structure and to differentials.

In Part III of the report attention is turned to

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LORRY-BUS-COACH

Cuts Enforced by Staff Shortage

DRASTIC cuts will have to be made in Bradford City Transport schedules to bring them in line with the reality of staff shortages. Mr. C. T. Humpidge, general manager of the transport department, says this step has been reluctantly but unavoidably taken. "The time has come when we have to cut services. We just cannot man the vehicles." He said the department was 240 below its average establishment of 1,900 drivers and conductors, representing a 20 per cent loss of staff. So difficult had the problem of obtaining staff become that 20 per cent of the hours worked by conductors and drivers employed by the department were on overtime rates, and these overtime rates cost £1,100 in one week alone.

Vehicle Unsuitable for Poisonous Goods

FOR carrying, or allowing to be carried, an insecure load and transporting a poisonous substance in an unsuitable vehicle, a Leicester lorry driver and his employer, Enderby Transport, Limited, were fined a total of £40. This was a sequel to an incident at Ashby Parva when three drums of potassium cyanide, described as a deadly poison, fell from a lorry and widespread safety precautions had to be taken by the police and local authorities as a result of the contents being scattered. It was stated that the company had ensured that no further such loads would be carried.

Reception of T.R.T.A. Survey

SINCE publication of the T.R.T.A. survey of C-licensed vehicles there has been a silence on the part of those critics who for years have been vociferous at the supposed amount of "empty running" performed by C-licensed operators, says Mr. H. R. Featherstone, assistant national secretary of the Traders' Road Transport Association. While he did not claim that it had quietened all C-licence critics the amount of adverse comment had been relatively small and mostly pitched in a minor key. He thought that the T.R.T.A. had had no difficulty in answering all valid points of criticism which had been raised since publication.

Cream for Hauliers

DISTRIBUTION work, as carried out by the Unilever associate, S.P.D., Limited, was discussed by Mr. J. C. A. Whitworth, north-western divisional manager of S.P.D., at the meeting of Merseyside district of the Institute of Transport in Liverpool on March 3. S.P.D. arrangements, he said, were based on a nationwide system of depots and a nominated day delivery service of agreed frequency to every point. The areas served from the depots varied greatly according to population densities, but 30 miles would be an average radius of operation with a number of isolated runs up to 75 miles involving two-day journeys. The depot fleets consist of 5-5½-ton box vans for general traffic and 2½-ton refrigerated vans for frozen food, with a number of vehicles of special types to meet individual depot needs. It was virtually impossible to achieve an even flow of tonnage throughout either the week or the year. Resort must therefore be made to the professional haulier and this

situation was one where it might be suggested that the old phrase about "skimming the cream" was relevant. "The traffic for which the professional haulier is engaged is that which gives the best payload and makes the least demand on the driver, retaining the work for which the more specialised skills are required for the C-licence vehicles," Mr. Whitworth stressed.

Container Taxation in Eire

DURING the Committee stage of the Finance (Excise Duties) (Vehicles) Amendment Bill in Eire, which is designed to implement the definition of unladen weight of vehicles for motor tax purposes, the Minister for Local Government said that



Three of the women drivers employed by Tarslag, Limited, on its fleet of Dodge P6 tippers; right, an Atkinson tanker working for a Hull operator

it was proposed to provide that, where containers were used on a lorry only for part of the tax year, a refund of tax in respect of the period when the containers were not used would be made. It would not be possible, however, to provide for a refund in cases where containers were used occasionally throughout the entire year.

Aberdeen—Northern Ireland Containers

NEXT-DAY delivery is offered by Charles Alexander and Partners (Transport), Limited, which has just introduced a daily door-to-door container delivery service to and from Northern Ireland in conjunction with Northern Ireland Trailers, Limited.

More Motorway Services Sought

WHEN the Birmingham and Midland Motor Omnibus Co., Limited, applied before the West Midlands area Traffic Commissioners last week for an express licence in respect of a motorway express service linking Coventry and London, Mr. R. Cope, deputy traffic manager of the company, said that he thought coach competition would lead to more economies by British Railways. Mr. Cope said: "This is something we have been waiting for for 25 years—a chance for coaches to travel at a speed of which they are capable and give an

improved service to passengers." Mr. E. W. I. Arkle, now chief traffic officer, British Railways central staff, said the proposed services would have a serious effect on railway services. They were now recovering after a falling away of passengers at the end of last year. The benefits of the large amount of money spent on modernisation would be delayed and the public would be slow to change back to rail. Midland Red also seeks additional journeys on its Birmingham—London motorway service.

Public Reaction to Large Buses

PASSENGER comments about three Liverpool Transport experimental large double-deckers are rather mixed on such features as seating and exit and egress from the buses, but all are appreciative concerning the efforts being made for improvement and all are unanimous with regard to the provision of heaters. The buses are a Leyland Atlantean 78-seater, an A.E.C. Bridgemaster 76-seater and an A.E.C. Regent V 72-seater. Passengers are in general agreement concerning the



smooth running of all vehicles, particularly the Bridgemaster air suspension which maintains constant platform height. The front entrance loading on the Leyland and A.E.C. vehicles are received with mixed feelings, but all are in favour of either the sliding or jack-knife doors on the grounds of road safety as passengers are unable to board or alight from the vehicles whilst they are in motion. From a perusal of passengers' constructive comments on the three experimental buses it would appear that the combination of all outstanding features would provide perfect travelling facilities, says the department.

Sweet Farewell

AFTER an extended trial, Crossville Motor Services, Limited, has decided to cease to sell confectionary from slot machines in its buses. Concern at these sales had been expressed by Chester Chamber of Trade.

Slight Dilemma in Ceylon

THE Ceylon Transport Board states that it has no money to pay private bus owners compensation due to them on account of the nationalisation of bus services in 1958. Over 4,700 claims had been made on the Board by former operators and the compensation due to them is reckoned at

approximately £2,200,000. The Compensation Tribunal has already made the awards with regard to 3,238 claims, but no provision for payment has been made. The Board lost Rs.9,862,000 last year on its services. This was more than twice the loss in 1958, which was Rs.4,330,000. Expenditure was Rs.115,721,000 and revenue Rs.110,098,000, an operating loss of Rs.5,623,000.

Coal, Oil and Fertilisers

SUCCESSFUL application was made by Fred Chappell, Limited, Batley, to the Yorkshire area Licensing Authority in Leeds in respect of a total of 17 vehicles. The sole objector to the applications, British Railways, withdrew its objection during the course of the hearing. The applications were dealt with in three groups. Mr. P. Kenny, appearing for the applicant company, said that the first group was a takeover of three B-licensed tankers at present operated by Yorkshire Transporters, Limited, and offered no difficulty, since all the evidence had already been led and there was no objection as the application now stood. Mr. Ronald Chappell, a director, produced in evidence a schedule of earnings showing an average of £3,000 per vehicle during a period of eight months. Under the second group, said Mr. Kenny, it was sought to vary the conditions of seven B-licensed tankers to read "Road and building plant and materials, coal and coke, within a radius of 40 miles of Batley Post Office; fertilisers and weed killers as required." The increased radius under the first section of conditions was to meet the requirements of William Pepper, Limited, and Hargreaves (West Riding), Limited, both sister companies in the Hargreaves group. The second section of conditions related to carriage of solid and liquid fertilisers and weed killers for two other subsidiaries of the group. Asked to explain what connection liquid fertilisers would have to seven tipping vehicles, Mr. Chappell said that it was for delivery from his plants at Batley into agents' storage tanks and, later, to farms for application, and a removable tank was fitted temporarily to the tankers.

Mr. Kenny said that the third group of applications related to seven vehicles—three tankers at present on contract with the North Eastern Gas Board, which it was desired to make available for the carriage of industrial coal to customers and still continue to carry for the Gas Board, and four tankers, three of which were on contract with the Gas Board and the fourth on C-licence, carrying the company's own fuel oil. The conditions sought in respect of the tanker vehicles was gas liquor; and crude materials for manufacture of fertilisers and weed killers as required. This latter side of the business was a vastly growing one and new plants were in course of erection. A 10-year contract for carriage of the materials by railway tankers was being negotiated with British Railways, and it was a development that was "going to affect vast numbers of road vehicles."

Bus and Coach Developments

Central S.M.T. Co., Limited, proposes revision of a number of its services in and around Hamilton.

Glasgow Corporation applies for a Radnor Street—South Nitshill service. On outward journeys local passengers would not be carried on the Radnor Street—Arden section.

Edinburgh Corporation seeks to extend its Comiston (Oxgangs Bank)—Granton Square service via West Granton Road to Muirhouse (Pennywell Drive) and to divert its Morningside—Granton Road Station service at Goldenacre to operate via Ferry Road and Clark Road to Lennox Row.

Gosport and Fareham Omnibus Company and Hants and Dorset Motor Services, Limited, both apply for summer services between Fareham (Bridgemaster) and Lee-on-Solent.

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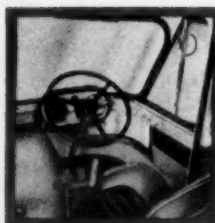
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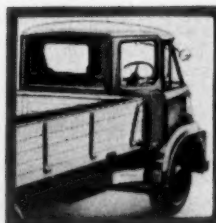
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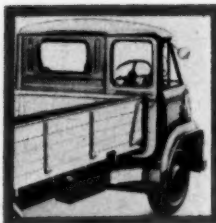
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MC 47

ROAD AND RAIL CO-ORDINATION

Possible Cure for Congestion

By **ARTHUR J. WHITE, M.Inst.T.,** formerly Assistant General Manager, Eastern Region, B.R.*

ALTHOUGH road transport has advanced primarily on its merits, its growth has been artificially fostered by the encouragement given by successive governments to the motor industry. Motor transport also obtained the use of a road system capable initially of carrying a good deal of additional traffic without the need for much in the way of additional tracks or irksome track disciplines. That stage has already been passed; with only 8½ million motor vehicles on the roads our main arterials, our big cities and many smaller towns are gumming up. A projection of the recent growth of vehicle registrations gives 20 million by 1970; intolerable congestion on the main roads and near-paralysis in the cities are just round the corner.

Ought we to gain a little breathing space by restricting new registrations? Possibly, but I do not think we shall. The right of anyone who can afford it to run his own car and the right of every manufacturer or trader to carry his goods in his own vehicles are now among the basic freedoms of a democratic society and we must put up with the consequences as best we can. Road improvements will doubtless be carried out at a faster pace but additional capacity is likely to be absorbed faster than it can be created, especially in the cities. Salutory track and terminal disciplines will clearly have to be accepted wherever congestion occurs, beginning with really effective restrictions on street parking and perhaps going so far as to prohibit the use of selected city streets by certain classes of vehicle.

"Auto-dominant Urban Transport Infeasible"

These measures may make the arterials reasonably usable for a while but it is doubtful whether they can save the cities. In the United States, where the growth of private transport and the decay of public services have proceeded faster than here, it is openly stated that "auto-dominant" systems of urban transport are "infeasible." City after city is calling for express bus services and new railways on, above, or below ground level. The trouble now, in the newer conurbations, is that the population is spread so thinly over such large areas that public rapid-transit systems could have little hope of paying their way.

We have been warned in time not to destroy and rebuild our cities, or to plan our new towns, mainly to serve the motor vehicle; we must appreciate that congestion on the roads will never be cured by building more. In any case we shall be obliged for physical and financial reasons to stop short of providing all the new road facilities demanded by private transport and to turn back to public transport for some easement, whether we like it or not.

Public v. Private

It is also apparent that rail-road relations are now incidental to the struggle between public and private transport. Railways and road operators in the public service are being lined up together by force of circumstances and it is to be hoped that, rather than continue what is now no more than an expensive family quarrel, they will find it more useful and profitable to work together. On the freight side that would not, of course, exclude the possibility of trunk haulage arrangements between the railways and C-licence holders; the interests of public hauliers would best be served by co-ordination with the railways in the middle- and long-distance fields.

At the present moment attention is being directed in many quarters to the problems of road congestion on the one hand and the financial state of the railways on the other. Many widely different proposals are being put forward, but one cannot feel satisfied that all of them spring from a full understanding of the root causes of our present difficulties; there is a risk that the two problems may be tackled separately, without acknowledging that they have common origins and that their cures are largely inter-dependent.

It is really rather obvious that our greatest error in recent years was to act as if we believed that motor vehicles could meet all our transport needs; that our road system, with a little tinkering, could carry the vehicles; and that we could, with impunity, allow traffic ideally suited for rail conveyance to be transferred to the roads in large quantities. It is clear that the balance must be redressed; that we must make better use of our existing resources, especially the railways; and that we should employ rail and road in combination rather than in competition, in order to prevent the railways from dying of starvation and road transport of strangulation.

Passenger Problems

Three disciplinary measures—clearing the streets of parked cars, accelerating the buses and staggering office hours—could give a large measure of early relief to city congestion at little cost. But transport demands are certain to grow and if a recrudescence of street congestion is to be avoided it will be necessary to build new tube railways, both in London and some provincial cities, and to modernise the surface lines that have not yet undergone the treatment. In the outer suburban areas, and beyond, car parks should, of course, be provided on an adequate scale; every effort should be made to ensure that bus routes are designed to serve the stations. The public passenger services, in combination, can meet all demands for urban

and suburban transport if the buses are given a fair run in the streets and the railways are not expected to handle ever-increasing peak concentrations.

These are reasonable conditions and if we intend to master the commuter problem we ought surely to accept them; for it is evident that private transport can make but a small contribution and that at too high a price in terms of congestion. In country areas the question is how to maintain public services in face of declining patronage. We are told that withdrawals of rail and bus services will depopulate the countryside, but surely it is the mechanisation of agriculture and the attractions of the towns that are checking the growth of rural populations? Increasing numbers of cars, motor cycles and auto cycles, only slightly offset so far by the withdrawal of rail and bus services, have restrained rather than accelerated a permanent exodus from the villages.

Rural Investigation

But from the point of view of public operators the situation will get worse rather than better and there is a limit to the number of loss-making services that an operator can afford to run. It would be logical to organise a series of examinations of rural transport arrangements, area by area, and attempt to assess the true needs; to select the rail or road services that should be retained on social grounds and to discard the remainder. To suggest something of this sort is not to decry the extremely valuable work that has been done in this field by the Transport Users' Consultative Committees, but rather to create a comprehensive background of fact and opinion against which proposals for reductions or alterations of services can be better judged than is sometimes the case at present.

On the whole, co-ordination of long-distance rail and local bus services has gone as far as is economically justifiable and physically possible at the present time. But services must be arranged primarily to suit local needs and run on a time-interval basis which cannot always be related to main-line services, but as the railways are modernised and wayside stations are closed regular-interval timetables will gradually become the universal practice and the association of rail and bus timings should be easier. The running of special buses to meet special trains of one sort and another is already common practice and can readily be extended to meet new requirements.

Freight Problems

To turn now to the freight side where, apart from the rail and collection and delivery services offered by the railways for a century or more, co-ordination is conspicuous by its absence. The reasons are not far to seek; the first is the pervasive influence of the impression, to which I have already referred, that rail and road are natural enemies and must be left to fight it out; the second is that owing to the unequal treatment of the two industries by the powers that be, the luck has gone all one way and we have been in danger of reaching wrong conclusions about the proper places of rail and road in our transport economy.

The opinion of road transport enthusiasts, although it is more often implied than openly expressed, seems to be that railways have had their day and must yield place to a superior form of transport just as, not so very long ago, the canals were supplanted by the railways. They point to the advantages of door-to-door road transport in terms of convenience, reliability, relative freedom from damage and sometimes, though in rather muted tones nowadays, to cheapness. Some of this is true in part, and in any case one can quite understand that road transport interests, moving from success to success, see little virtue in complicating their methods and checking their forward march.

Counter Argument

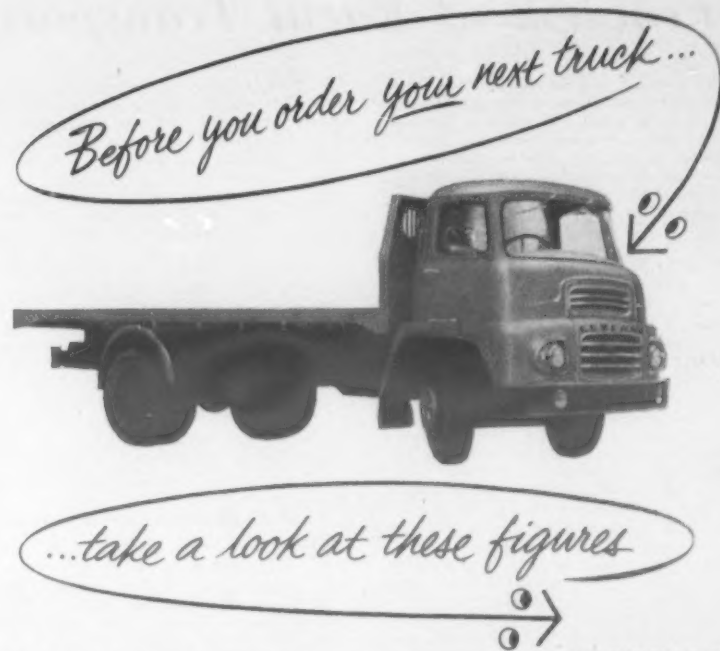
The broad counter argument, as I understand it, is that road transport is pre-eminently suited to short-distance work and door-to-door conveyance over longer distances of traffics, especially susceptible to damage in transit or handling; that heavy traffics, except perhaps over short distances, should be left to the railways; and that the movement of all other traffics should be a joint responsibility, road looking after assembly and dispersal and rail the trunk haul between exchange depots.

It is claimed that delays on the railways are much exaggerated; that such as do happen are mostly due to failures of obsolete equipment and that when modernisation is complete, movement by rail will be just as reliable as by road. It is as simple to load and unload a container as a lorry and sometimes more convenient, as the container can wait when the lorry cannot; and how a unit load moves, whether by road throughout or by rail and road, need matter not at all to the receiver, provided it arrives at the time expected and in good order.

Future Co-ordination

The co-ordinator's picture of the future, as it is drawn at present, provides a network of road-rail exchange depots, perhaps 20 to 30 miles apart, to which general merchandise in container loads would be brought by road, there to be loaded on to flat cars and sent off on fast braked trains to other depots from which the containers would be delivered home by road. This is not, I think, a

(Continued on page 15)



Incredible, but true. After completing 300,000 miles on both quarry and long distance haulage, carrying a 7-8 ton pay-load, this operator's Leyland Comet was still averaging 18 m.p.g. During that time, the only attention given to the engine was re-ringing with standard rings at 150,000 miles. Lubricating oil was changed every 3,000 miles and filters at 6,000. After such a remarkable performance, it was only natural that when the operator placed his next order, he looked no further than the Comet. And, good as those figures for that earlier model were, it's our guess that the new CS3 Comet will beat them easily. It can do the same for you.

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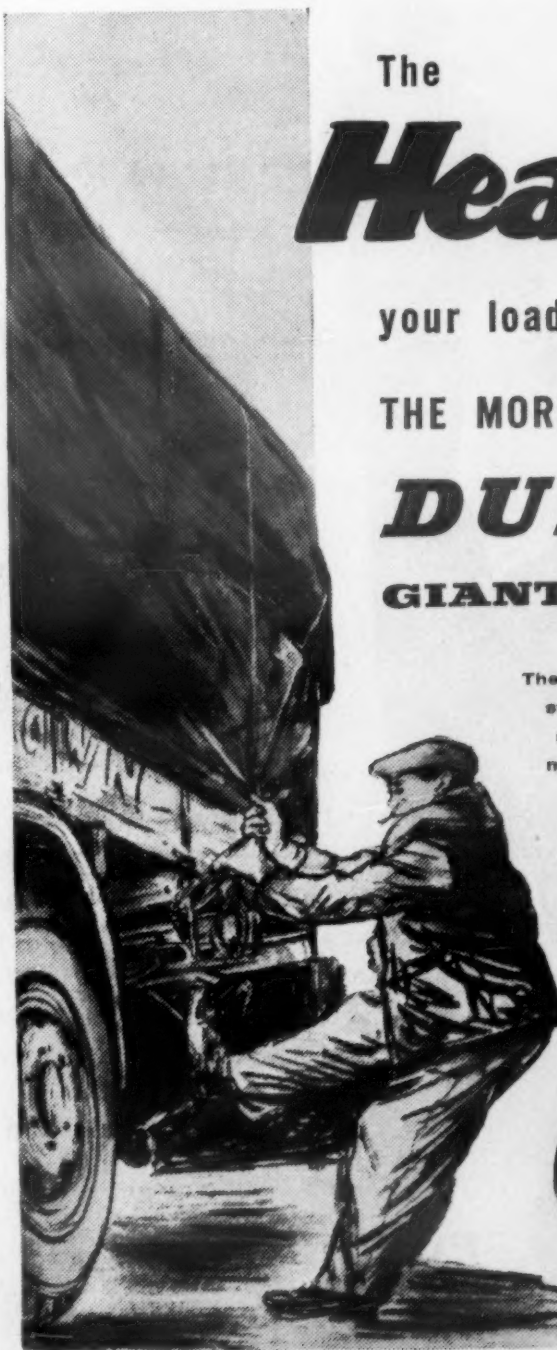
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* Abstract of paper presented to Metropolitan Section, Institute of Transport.

LETTERS TO THE EDITOR

Problem of Rural Transport

The Editor is always glad to receive letters from readers on subjects germane to the transport industry, but these should be written as concisely as possible. The opinions expressed therein must not, however, be regarded as having editorial endorsement. Where correspondents desire to use a nom-de-plume it is essential that the Editor should be informed of the name and full address of the writer as indication of good faith.

From Brig-General Sir H. Osborne Mance, K.B.E., C.B., C.M.G., D.S.O.

SIR,—The articles by Mr. David St. John Thomas on the problem of rural transport in your issues of February 20 and 27 contain many practical suggestions for dealing with non-paying rural services. It is refreshing nowadays to see proposals which are based on underlying principles. These appear to be that the cost of non-paying services should be reduced to the greatest extent possible, that the necessity for a non-paying service in the public interest, and its cost, should be considered by an independent authority, and that the cost should be shared by all other users of bus transport (out of some relief on fuel tax).

Unfortunately the main issue is mixed up with the demand for tax reduction on the bus industry as a whole, which is quite a different matter. If this were eliminated from the argument the rest of the scheme would amount to bus users collectively paying the cost of non-paying bus services, a logical policy which in itself might not appeal to the bus industry.

Mr. Thomas points out that there are also non-paying railway services which have to be maintained in the public interest. These, it is suggested, should be covered by a Government subsidy of not more than £5 million, though this amount does not appear to be related to any estimated losses. I venture to suggest that in principle the need for,

and cost of, essential non-paying services of both road and rail should be assessed by the proposed independent authority. It remains for Government decision whether the cost should be met by the users of all forms of transport or by a direct subsidy from the State.

As regards relief for the bus industry generally, it would be useful to obtain a decision as to the basis for the taxation of road transport. If it is to be on gross ton-miles, rough calculations would seem to show that, owing to their heavy fuel consumption, omnibuses are at present paying appreciably more than their share of road taxation, pointing to a substantial further reduction in the registration tax. Any further concession than this would, I suppose, have to take its place among the demands for Government subsidy from all and sundry, as reported in the press.—Yours faithfully,

H. O. MANCE.

18-22 Abchurch Lane,
London, E.C.4.

New Walthamstow-Victoria Tube

SIR,—Does the proposal to construct the Walthamstow-Victoria Tube offer an opportunity for a combined tube and main-line railway route across London? Whatever extra financial or operational difficulties there may be, there is surely a sore need for better main-line traffic interchange routes between the north and south side main-line termini. Very early electrification ideas for the Great Northern Line did, I believe, include a tunnel connection between Kings Cross and either Waterloo or Victoria.

Is it not possible to provide a standard gauge tunnel on the section from Kings Cross to Victoria? Already there are connections at Kings Cross for Eastern Region and L.M. Region traffic with the widened lines of the London Transport Executive.

Although it may be an innovation to put tube and main-line traffic on the same rails under London, during off-peak hours, or some part at least of the night period, much passenger and freight traffic (including parcels in through vehicles) would surely pass quickly by electric traction through the new tunnel. This would give more intensive use of the tracks and help pay for the heavy outlay.—Yours faithfully,

H. BONNETT.

24 Torrington Road,
Pervale,
Greenford, Middlesex.

The Victoria Line

SIR,—I was most interested to read Mr. Bates's letter in your issue of February 27 about the Victoria Line, and the editorial comment thereon. While agreeing with some of the points he made, I cannot agree completely with his conclusion.

There can be no doubt that an amazing amount of trouble has been taken in preparing the Victoria Line report, which makes it all the more curious that the report contains no mention of the St. Pancras-Barking line of the former L.T.S. In particular, although the proposed Blackhorse Road station of the Victoria Line is to be sited exactly opposite the existing L.T.S. station, no mention of this is made in the map of interchange facilities. I scarcely like to suggest that mention of this line has been deliberately omitted, yet there can be no doubt that this line has a vital bearing on the Victoria Line problem.

You yourself point out that stations on the St. Pancras-Barking line are badly sited. This could be alleviated by building platforms at Walthamstow (L.T.S.) on the Chingford line, thus affording interchange there, and by reopening the former station at St. Ann's Road. It would also be possible, if thought useful, to build a two-level interchange station where the L.T.S. crosses the Lea Valley line, and resite Seven Sisters station south of its present position to give it platforms on the L.T.S. The St. Pancras-Barking line could then be electrified with the rest of the L.T.S. system, and a vastly improved train service intro-

duced. There would then be no need for the Finsbury Park-Walthamstow section of the Victoria Line.

The Kings Cross-Victoria section is of course essential, and in my opinion work should start on this immediately. The Finsbury Park-Kings Cross section would be useful if taken to the surface at Finsbury Park, where room might be found for carriage sidings. As regards the estimated loss on running of the Victoria Line, it is worth noting that the operating loss would vanish with the increased fares now being charged; interest charges on the investment should be disregarded anyway.

It is true that the St. Pancras-Barking route is slightly longer between Kings Cross and Walthamstow than the proposed Victoria Line route. This would be compensated for by the faster operating speeds of main-line trains, and the Northern Line connection available at Kentish Town. Furthermore, think of the increase in revenue from taking people for a longer journey between the same two points!—Yours faithfully,

R. J. S. CROSSLEY.

Corpus Christi College,
Oxford.

The Great Central's Role

SIR,—The admirable letter in your issue of February 13 over the signature of Mr. A. F. Wallis will have proved of intense interest to many of your readers. Few possess a wider knowledge of British rail arteries, their traffics, and their vagaries than the writer of that letter.

He paid a just tribute to the Great Central in two wars, and one may add to it the splendid loan it made to the R.O.D. in France of a large number of first-class motive power units in the "Pom-Poms" and 0-8-0s, whilst its 2-8-0 design became the W.D. standard of the 1914-18 war. It was my own privilege to ship these back in 1919 to Richborough on the train ferries. Locomotives loaned by some other railways fell far behind the G.C. standard.

Those who can recall Great Central services before grouping will remember their excellent reputation for punctuality, cleanliness and other virtues, and future students of railway history will think it curious that the disappearance of the fast services from Marylebone coincided with temporary difficulties on the L.N.W.R. route owing to extensive reconstruction; the Midland contribution is inevitably limited by the paucity of platforms at St. Pancras and their comparatively short average length. Temporarily, there is in effect the speed restriction to walking speed over the alternative route at Kiveton Park on the Retford line leading to Kings Cross—a route used by the Master Cutler. Over the years, many have maintained that the G.C. should never have been extended south to London, and some may remember the question of its conversion to a motorway being raised by a military expert in an address to the Institute of Transport just before the 1939-45 war. But Mr. Wallis, expert as he is, has placed the strategic value of the G.C. and its London extension in true perspective, and paid tribute to the wartime tasks it achieved with such conspicuous success.

The G.C. light expresses of early this century have their modern counterpart in the inter-city diesels. It is of interest to speculate how the late Sir Sam Fay or the L.N.E.R. management would have dealt with the present situation.—Yours faithfully,

C. E. R. SHERRINGTON.

Byways, Queens Road,
Belmont, Surrey.

Results of Motorways

SIR,—Some years ago you allowed me access to your columns to develop the theme that any benefits accruing from motorway construction in this country are for ever likely to be nullified by the increasing terminal congestion thus generated in our cities and resorts. Some would say that we are already suffering from such a condition.

Would you now permit me to hazard another forecast—that long before this island carries 17 million motor vehicles or anything like it, *homo sapiens* will have come to realise what consummate waste of time being an owner-driver really is, and will be only too happy to entrust himself to the professional "driver", whether of train or bus, aeroplane or ship? The fact that our grandfathers employed full-time chauffeurs is hardly today's solution, but is some indication of their estimation of what is elegance of living.—Yours faithfully,

JOHN C. PALMER.

Broadway, Apuldrum Lane,
Chichester, Sussex.

PUBLICATIONS RECEIVED

HOLIDAYS ON BRITAIN'S ISLAND WATERWAYS. General Information on available holiday itineraries on Britain's reawakening inland waterways. The British Travel and Holidays Association, 64-65 St. James Street, London, S.W.1. Price 1s. 6d. post free.

NEW WELBECK MASTER CLEANER. The latest brochure published by New Welbeck, Limited, Moulsecomb Way, Brighton, 7, which describes and illustrates the company's range of industrial and commercial cleaning machines. Also included are illustrations of New Welbeck machines in use in transport vehicles.

WHAT WE MAKE AND THE HOME OF RAPIER ENGINEERING PRODUCTS are two pictorial brochures recently published by Ransomes and Rapier, Limited, Waterside Works, Ipswich. The first illustrates industrial plant from small truck-mounted cement mixers up to the giant W1400 walking dragline, fork trucks, mobile cranes and massive railway plant, while the second shows phases in the manufacture of this wide range of products.

EASY-TO-HANDLE CERTAIN-TO-OPERATE FIRE-FIGHTING EQUIPMENT. A new and widely descriptive brochure covering the general subjects of fire and fire protection and illustrated catalogue of the many types of fire-fighting equipment produced by Nu-Swift, Limited, Elland, Yorkshire, from whom copies are available on request. The book includes a most interesting historical synopsis of fire-fighting during 500,000 years.

FOLIAC COLLOIDAL GRAPHITE and FOLIAC COLLOIDAL DISPERSIONS. Two new leaflets issued by the Morgan Crucible Co., Limited, Battersea Church Road, London, S.W.11, describing the numerous applications in transport and industry of the various grades of colloidal products manufactured by its subsidiary company, Graphite Products, Limited.

ANOTHER STEP AHEAD AND LOOKING AT LOUVRES. Two leaflets issued by Courtney, Pope (Electrical), Limited, Amburst Park Works, London, N.15, describing respectively the company's new range of Stripline fluorescent batten fittings designed for low cost and easy interchangeability and latest range of low-cost louvres.

NEW LITERATURE describing equipment of use about the garage, workshop and store has just been issued by Vulcaset (Great Britain), Limited, 87-89 Abbey Road, London, N.W.8. There are three illustrated leaflets describing self-aligning non-slip ladder feet, the Augur range of safety steps, ladders and platforms and a rubber conduit strip that protects electrical leads at points where they cross floors.

QUESTIONS AND ANSWERS ABOUT ANODISING. A new booklet just published by Reynolds Metals Company, P.O. Box 2346, Richmond 18, Va., U.S.A., which answers 22 questions commonly asked about anodising and other finishes for aluminium. PORCELAIN ENAMELING OF ALUMINIUM. A new 22-page guide book on the application of porcelain enamel's to aluminium just published by Reynolds Metals Company, Dept. PRD-27, Richmond 18, Va., U.S.A. It covers alloy selection, metal preparation, choice of frit, slip formulation, enamel application and firing, and compares the properties of porcelain enamelled aluminium with those of porcelain enamelled steel.

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SOME ASPECTS OF THE SHORT SEA TRADE

Value of Liner Conferences

By S. A. CLAYDON, Continental Traffic and Shipping
Manager, Eastern Region, B.R.*

THE value of this country's shipping industry's contribution to the general economy needs no emphasis, earning as it did some £135 million in foreign exchange in 1958. Its still more valuable contribution to our national development has been tremendous and decisive. Our ships in the narrow seas are responsible for only a small, but nevertheless important, part of the total. Further, it is imperative that we should maintain our share of the international carrying trade, for failure to do so involves not merely a shortfall of foreign currency earnings, but a real outpayment of currency to those nations who might supplant us in this activity.

Flag discrimination is not a live subject in the Anglo-Continental trade. It is free for all and none is in possession of a monopoly. Entry is not regulated by traffic courts or licensing systems. It is a trade which has been carried on from time immemorial. In 1959 over two million Britons took a Continental holiday, probably over 50 per cent of the total number of travellers across the Channel. Nor have we reached the final peak. Given peaceful conditions and continued growth of the national income, it is no wild dream to suggest that the travel habit will spread further down the widening layers of the social pyramid, and that during this decade the volume of Continental holiday travel will have doubled from under 5 per cent to nearer 10 per cent of the total population—a figure already reached in some of our Continental neighbouring countries. A recent survey on behalf of the British Travel and Holidays Association estimated that, in 1955, 25 million people took a holiday away from home. In 1958 the figure had reached 27 million and, in 1959, 30 million. If staggered holidays become a widespread habit, Continental travel may provide an increasingly popular solution to the "out of season" holiday problem. The market is vast.

Growth in Travel

The shipping services of the British Transport Commission and its associated companies play a large part in this trade. Some three-fifths of the travellers between England and Europe use surface routes. In 1958, of a total of 7,332,000 conveyed by all routes—both surface and air—the British Transport Commission and the associated companies carried 4,169,000. And if we look at the growth in the total volume of travel we see the following expansion:

Year	Total	All Surface Routes	By Air
1938	3,263,000	3,090,000	173,000
1948	2,505,000	1,988,000	517,000
1957	6,728,000	3,987,000	2,741,000
1958	7,332,000	4,387,000	2,945,000

Air transport has claimed the most spectacular rises in business. Its capacity advances rapidly and if the travel trade market continues to expand, it will claim a large share of the increase, although experience in the ocean travel field should not be taken as an omen in the Anglo-Continental trade. But in this business I am convinced that it is fundamentally important for the surface carriers to make every effort to offer a constantly improving standard of comfort and service. Baggage should be neither an expense nor a burden; frontier formalities should be eased or eliminated; personal service and courtesy must be offered to all. In some of these respects we have not advanced at all.

Our railway passenger ships in this trade have always been built to the highest standards. Dimensions have constantly increased until we have today 5,000-ton ships with a speed of 22 to 23 knots on the Harwich—Hook of Holland route and our associated line, the Zealand Steamship Company, has introduced its latest ship into the service—6,000 tons gross, with a speed of 23½ knots.

Port Problems

The packet ports from which ships operate in the short sea trade are not the easiest of harbours from a navigational point of view and when it is realised that on certain cross-channel services a ship may make up to eight arrivals and eight departures a day, it is plainly necessary to provide all possible aids to navigation if schedules are to be maintained. This involves in the latest designs not only true motion radar, with secondary sets to ensure constant availability, but also Decca Navigators, direction finding units, bow rudders, lateral thrust units and twin stern rudders. No doubt there will be further advances in the efficiency of these aids but it may well be that, even taking them into account, the maximum practicable ship dimensions have been reached. Still larger vessels would make for slower handling in confined water and in berthing, with consequent lengthening of the passenger transit time through ports, which would not be acceptable.

There are two other forms of surface passenger transport in course of development, but they are more likely to affect the shipowner somewhat later in this decade. I refer to the Hovercraft and the hydrofoil craft. Although estuarial and other smooth waters come first to mind as possible areas of commercial exploitation if and when the Hovercraft project develops satisfactorily, yet little imagination is needed to see the commercial possibilities if it could be developed to a craft three or four hundred feet long, with a payload of a few hundred tons and a speed of 60 or so knots.

The hydrofoil principle has been the subject of experiment for the last 30 or 40 years and has now reached the stage where it is being exploited commercially—notably in the Aliscafo service from Venice to Trieste—a distance of some 80 miles—accomplished, I believe, in under 1½ hr. Information available is scanty, but it appears to be a machine requiring expensive propulsion methods with high fuel consumption. It is reported that a larger craft, over 100 ft. in length with a range of 700 miles, is under construction in the United States. Its supporters are already talking in terms of craft of 1,000 tons d.w. But developments of these two craft might bring navigational problems of considerable difficulty in busy restricted waters.

Of little account up to 1939, accompanied motor car traffic has in the last decade blossomed into big business. And if prospects for the next five years may be based on experience over the last five, then

they are very good indeed. We have now over 4½ million motor cars on our roads. The rate of new registration is now running at over 600,000 per year, with promises of increased production. What effect will these increases have on demand for passage to the Continent? An increase of 100 per cent or more in the next few years? How are such numbers to be carried? The growing pressure of demand at the summer peak periods will surely produce problems difficult to solve, even though the capacity by both air and sea has increased greatly over the past two years. This big business could become much bigger.

Estimated Traffic

Authors of papers on various aspects of the short sea trade have found a lack of statistical information, and the position in this respect is unchanged. Mr. R. G. Grout, chairman, General Steam Navigation Company, gave a paper in 1954 to the Institute of Transport and there estimated the tonnage engaged in the trade as something over 100 ships having a gross registered tonnage of 100,000 tons, with a bale cubic capacity of some 7 million cu. ft., carrying some 2 million deadweight tons of cargo per annum. I have seen no other authoritative estimate. It may well still be reasonably accurate, for in the general cargo-carrying section of the continental trade the variations have not been sufficiently great to alter the pattern of the activities of the established liner companies. In 1938 the coal exports to Europe (including Central and Southern Europe) from this country amounted to some 24 million tons. In 1954 they were no more than 10½ million tons and in 1958 under 3 million tons. And there is little compensating gain. Some increase in the coastal oil tanker trade has perhaps partly compensated for the loss, but only partly.

The following details are of interest regarding the magnitude of European trade with the United Kingdom for the year 1958:

	Import	Export
Holland	£159 million	£98 million
Western Germany	£136 "	£123 "
Denmark	£116 "	£76 "
France	£101 "	£72 "
Belgium	£80 "	£59 "

There are many shipping services to the Continent, and inspection of Lloyd's Loading List will show no less than 35 from English and Scottish ports to some 20 continental ports within home trade limits. You will realise from this that industry has available shipping services to cater for all its varying needs. Very few of the railway shipping services are exclusively passenger, and most ships are mixed passenger and cargo carriers. These, together with the train ferries (mixed in the Southern and cargo only in the Eastern Region), and the few conventional cargo ships, have a gross registered tonnage of 88,909 tons.

Those engaged in these trades earn their living in a world of harsh reality, meeting competition from opportunist low-cost operators wherever they think they see a profit. Nevertheless, most of the established liner companies have managed to stay in business through the years, taking the rough with the smooth, and our railway shipping services are among them. Our Harwich—Rotterdam and Harwich—Antwerp services will reach their century in 1963 and 1964 respectively.

Advantages of Conferences

It is natural that in these circumstances groups of lines having common trading interests should avoid ruinous competition and its inevitable consequence of bankruptcy for some by combining together for their mutual protection, and to the advantage of the shipper in many respects, by the formation of conferences. They are as much a feature of the short sea trade as the deep sea trades. There are the following conferences in the short sea trade: Holland—East Coast; Mersey; Continental Rail and Water, London—Hamburg—Bremen.

A liner conference is an organisation whereby a number of companies combine to operate vessels according to rules (which form the basis of the conference) agreed between them and abide by common policies and conditions for their mutual benefit. There may be a considerable number of members within a conference and by acting together they are able to provide a sufficient number of ships to meet trade requirements and at the same time avoid the waste of over-provision of capacity. This may be achieved by apportioning cargo either according to the port of loading or by pooling for freight purposes part of the cargo or by agreed schedules of rates designed to secure prospects of economic voyages for all members. Outside opportunist competition can better be fought by a determined conference on behalf of all. Combined services may well result in considerable improvements in the quality of service offered to shippers. Greater stability is achieved to the benefit of all. One feature is often a deferred rebate system—in return for exclusive patronage of conference lines a shipper is offered rebate on his freight over an agreed period. Common advertising policy is another not uncommon feature.

Some Drawbacks

Membership has some disadvantages for the shipowner. He must abide by the rules of the club, however irksome they may be at times. He has to consult his fellow-members before he can alter a freight rate (usually done through an established secretariat) and cannot always tailor his service quickly and conveniently to meet the important customer's needs. For the shipper reliability and regularity of service are the principal immediate advantages. Rate stability enables him to quote forward prices with confidence—rates may be offered firm for stated periods—six months, for example—an important point in international trade.

On the other hand, there is the valid objection that conference machinery is often ponderous, involving circulation of propositions to all members, dealing with objections and amendments, before approval can be obtained. Meanwhile, the non-conference operator who is his own master can act without delay. Further, it may be argued that conference rates are at times unrealistic. There are, too, objections raised to the deferred rebate system. Such rebate is on a percentage basis and has to be claimed at the end of the loyalty period.

(To be continued)

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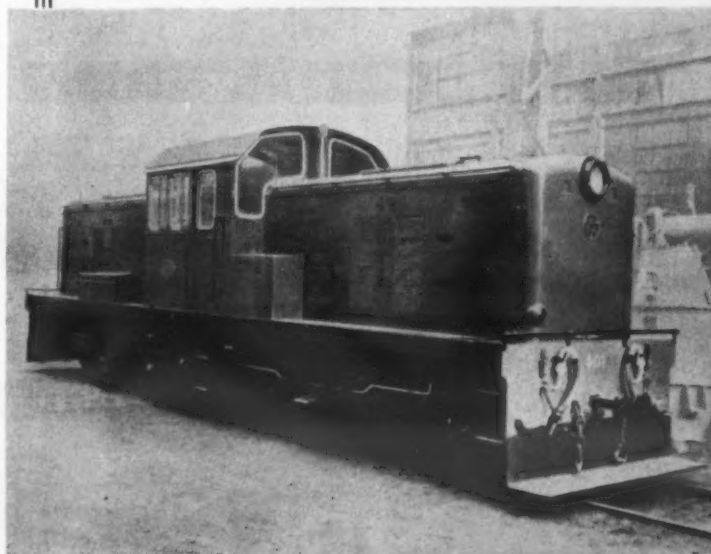
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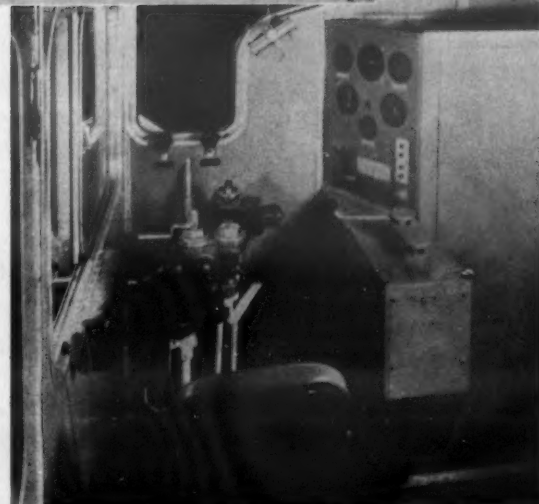
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* Abstract of a paper presented to the Railway Students' Association in London.

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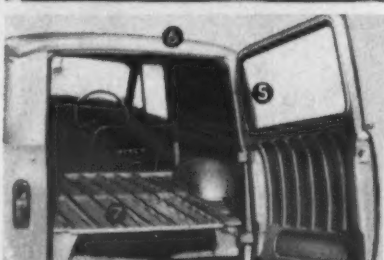
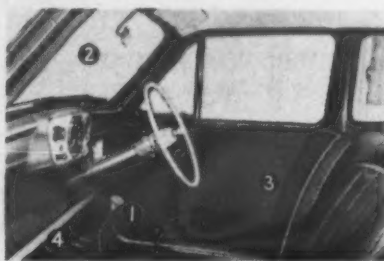
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NEWS FROM ALL QUARTERS

Deficit Less than Anticipated

The Rhodesia Railways deficit of £1,808,000 for the year ended June 30, 1959, was £2,250,000 less than the Minister of Transport feared it would be when he announced—two months before the financial year ended—an estimated loss of £4,319,000. The annual report issued on February 15 said surcharges imposed on May 1, together with increased copper and coal railings, helped reduce the deficit. Gross revenue was, however, £2,655,000 down on the comparable figure for 1957-58.

Heated Railway Freight Cars

A new heated boxcar, the first of a number to be built by the Eastern Car Company at Trenton, N.S., has been introduced by Canadian National Railways. They will carry perishable traffic requiring protection from frost in winter and general merchandise during the summer months. The cars, equipped with thermostatically-controlled under-slung methanol heaters, are capable of maintaining a constant temperature for as long as 40 days without refuelling.

Shorter Working Week Claims

On the eve of publication of the Guillebaud Committee report on railway wage scales, all three railway unions last week presented to the British Transport Commission their demands for what are customarily termed "shorter working hours." The National Union of Railwaymen and the Associated Society of Locomotive Engineers and Firemen asked for a 40-hour week in place of the present standard week of 44 hours, and the Transport Salaried Staffs' Association asked for a 38-hour week for those of their members who now work 42 hours.

Equipment for Czech Railways

During the present year Czechoslovak State Railways, which has a comprehensive modernisation programme already under way, proposes to electrify a further 115 miles of track and to lay 500 miles of welded rails. By the end of the year, it is announced, electric traction will have been introduced on 6 per cent of the country's rail network. New stock will be coming into use: for example, 90 electric and 105 diesel-electric locomotives, 300 passenger coaches and a number of modern dining, buffet and sleeping-cars. Meanwhile, to help speed passenger services on the outskirts, Vagonka Tatra has built an electric four-car double-deck train set.

Increase in Road Traffic

Motor traffic on the trunk and class I roads of England and Wales has increased by more than half in the past five years, the Ministry of Transport reports. A traffic census taken during a week in August, 1959, showed that the number of motor vehicles counted was 12 per cent greater than in the corresponding week of 1958, and 56 per cent greater than in 1954, when the last comprehensive census was taken. Private cars showed an increase of 11 per cent and heavy goods vehicles 18 per cent in the year. Travel by bus and coach showed a slight decline. August is normally a quiet month for goods transport.

Paris Sees Parking Meters

Last week the first parking meters in France were brought into service. They are at the Paris airport of Le Bourget and the charge for one hour is said to be 10d. The Paris police are anxious to see meters replace the unsuccessful "blue zone" disc system in the capital.

L.T.E. Acquires Another G.W.R. Engine

London Transport has taken over another 0-6-0 steam locomotive of the pannier tank type, No. 7752, from the Western Region of British Railways. It was built in 1930 by the North British Locomotive Co., Limited. It becomes L.94 in the London Transport stock.

North-East Train Services

On and from March 7 several changes and some additions were made to local train services in the West Riding, York and Scarborough areas and more diesel multiple-unit trains were introduced by the North Eastern Region. Most of the steam trains hitherto running between Leeds, York and Scarborough were replaced by diesel trains, which for the time being are run in the existing steam train timings.

Final Stage of Western Avenue Works

Work starts shortly on the final stage of the double-tracking of Western Avenue (A40), one of London's principal radial roads. Dual carriageways are to be constructed between the Uxbridge and Denham roundabouts, a distance of 1½ miles, and this involves widening and strengthening the existing viaduct to carry the road over the Fray's River and Western Region railway line. When this and other outstanding contracts are completed, Western Avenue will be dual carriageway throughout from Wood Lane, Shepherd's Bush, to Denham, a distance of 12½ miles. The Uxbridge—Denham section was opened as recently as 1943 and space was left for the second carriageway.

Midland Motorway Viaduct

The proposed line of a further 16½-mile length of the Midland motorway links has been published. It extends from the present northern terminus of the proposed Bristol—Birmingham motorway, just north of Lydiate Ash, to join the proposed Colshill—Dunston section of the Birmingham—Lancaster motorway at Great Barr, just south of Walsall. The new link would run from Lydiate Ash northwards, passing to the west of the villages of Frankley and Woodgate, to enter the Birmingham conurbation near Quinton. A feature of the road would be a three-mile long viaduct over the Western Region railway between the Birmingham—Wolverhampton road (A.4123) at Causeway Green through Smethwick and Oldbury to the south of West Bromwich. The motorway will be built on viaduct to minimise disturbance to property. From the Birmingham road (A.41) in West Bromwich to the junction with the proposed Colshill—Dunston motorway, south of Walsall, the route is substantially the same as that previously advertised in the original draft scheme for the Birmingham—Preston motorway.

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AP397

COMMERCIAL AVIATION

I.A.T.A. and Vertical Separation

MORE SUMMER PLANS

TO help the drive for more efficient use of air space, the International Air Transport Association is recommending revision of the present rules of the vertical separation of aircraft by 1965. Providing proper types of altimeters are installed in all aircraft flying above certain altitudes, I.A.T.A. believes that the 1,000-ft. rule for vertical separation between aircraft could be extended to 50,000 ft. from the present limits of 23,000 ft. in the U.S.A. and 29,000 ft. in Europe. The measures which will permit this extension are suggested in the operational conclusions of a new technical document on altimetry and the vertical separation of aircraft, issued by I.A.T.A. to governments, manufacturers and airlines. To allow a nominal distance of 1,000 ft. up to an altitude of 50,000 ft. for vertical separation, the document suggests, aircraft operating above 29,000 ft. in controlled airspace should be equipped with type II (precision pressure altimeter) or type III (precision altimeter with servo-correction facilities) altimeters, or altimeters with better performance. After 1965 all aircraft should be so equipped. For aircraft equipped with type IB (common pressure altimeter) the 1,000-ft. vertical separation is considered acceptable up to 29,000 ft. Above that altitude continued vertical separation of 2,000 ft. is recommended. I.A.T.A. also favours further investigation of the possibilities of developing suitable instruments for aircraft which would permit a separation interval of less than 1,000 ft. One method under consideration is the flight level indicator, based on the principle of a constant pressure interval. The contents of the I.A.T.A. documents are primarily based on studies initiated by the association's technical committee in 1952, as well as on subsequent development work by the International Civil Aviation Organisation Panel on Vertical Separation of Aircraft in which I.A.T.A. actively participated.

London-Seattle by Boeing

Pan American Airways will increase its Boeing intercontinental jet flights from London over the Polar route to three flights weekly from March 16. The airline will operate one flight weekly to Seattle and Portland as well as to Los Angeles and San Francisco. Flying time to Seattle will be 12 hr. 15 min.; Portland 12 hr. 50 min.

New Services Approved

The Minister of Aviation, after considering the recommendations of the Air Transport Advisory Council, has approved the operation of the following air services:

An internal service between Liverpool and Glasgow (Renfrew) by Starways, Limited, from June 3, 1960, until April, 1961.

An all-freight service by Tradair, Limited, on the route Southend-Hamburg-Gothenburg, from February 12, 1960, to December 31, 1960.

A normal scheduled service by Silver City Airways, Limited, between Lydd or Manston-Ramsay-Ostend between March and September each year until March 31, 1967.

T.W.A. Jets to Lisbon

Trans World Airlines will inaugurate thrice-weekly Boeing 707 intercontinental services between New York and Lisbon and Madrid on May 18. This new service will reduce the flying time between New York and Lisbon to 6 hr. 20 min. and Madrid to 8 hr. 20 min. Together with Super-Constellations they will give Portugal and Spain six T.W.A. flights a week. The Boeings will continue to Rome.

T.C.A. Super-Constellation Seating

An 82-seat configuration was introduced on March 1 by Trans-Canada Air Lines in its Lockheed Super-Constellations and eight first- and 74 economy-class passengers will be carried in these aircraft this summer. The T.C.A.'s transatlantic frequency will be 15 (seven jet) flights a week from June 1 and seats available will be more than 1,500 weekly in each direction. The daily jet service will be London-Montreal-Toronto-Winnipeg-Vancouver; the 127-seat DC8 will call at Glasgow twice a week.

American Airlines Does Well

American Airlines, Inc., last week reported net earnings of \$13,330,000 exclusive of profit on the disposal of property and equipment, for the year ended December 31, 1959. In addition, there was a profit, net after taxes, of \$7,683,000 from the disposal of property and equipment. The total net earnings amounted to \$21,013,000, compared with \$16,080,000 for 1958, when there was a profit after taxation of \$3,026,000 from the disposal of property and equipment. Provision for obsolescence and depreciation for 1959 amounted to \$31,306,000 (\$22,901,000). Revenues for 1959 were a record at \$377,700,000, an increase of 19 per cent over the \$317,240,000 reported for the previous year. During 1959 American carried 8,154,000 passengers a total of 5,737,000,000 revenue passenger-miles. This represented an increase of 14.3 per cent compared with the 5,021,400,000 revenue passenger-miles for 1958. The increase was attributed by Mr. C. R. Smith, the president, to the introduction of jet aircraft and improvement in general business. The airline carried 103,195,000 ton-miles of air freight—an increase of 9.3 per cent over 1958.

November Activity at British Airports

Air transport movements at British aerodromes in November, 1959, numbered 19,877, an increase of 22 per cent compared with November, 1958; the number of passengers handled increased by 28 per cent to 415,263. Freight picked up and set down amounted to 16,603.2 short tons, an increase of 62 per cent. Airports in the London area as a whole showed an increase of 8 per cent in air transport movements and an increase of 22 per cent in the number of passengers handled. At London Airport there were 7,496 air transport movements, an increase of 7 per cent compared with November, 1958, and 234,933 passengers were handled, an increase of 22 per cent. Most airports showed increases in passenger traffic over November, 1958, and amongst these were Birmingham (Edmond) by 100 per cent to 8,450; Gatwick by 90 per cent to 12,824; Prestwick by 73 per cent to 17,765; Southend (Rochford) by 47 per cent to 4,040; Manchester (Ringway) by 41 per cent to 28,551 and Belfast (Nutts Corner) by 40 per cent to 19,000. Other large increases in passenger traffic were at Newcastle (Woolington) by 426 per cent to 2,290; Leeds-Bradford (Yeadon) by 231 per cent to 974; Southampton (Eastleigh) by 134 per cent to 2,495; Blackpool (Squires Gate) by 98 per cent to 865; Bristol (Lulsgate Bottom) by 54 per cent to 1,165; Scilly Isles (St. Mary's) by 40 per cent to 822 and Lands End (St. Just) by 40 per cent to 820.

TILLING GROUP MANAGEMENT

IN PARLIAMENT

P.S.V. Speed Limit Question

INADEQUATE SUBURBAN ROADS

WHEN taxed about the proposal circulated in December, 1958, and since shelved, for a 40-m.p.h. speed limit outside built-up areas for passenger vehicles and light goods vehicles, Mr. JOHN HAY, the M.O.T. Joint Parliamentary Secretary, contented himself with the earlier official view, namely, that there had been "a good deal of lack of unanimity" in the response made by operators' organisations to the proposal.

Estimation of Future Traffic Volumes

Mr. V. GOODHEW asked the Minister of Transport whether he could now announce the revision of the basis for estimating future traffic volumes laid down in circular 727 of April 30, 1956. Mr. E. MARPLES replied that this would be incorporated in a general circular to highway authorities about the design of roads in rural areas.

Roads for New B.M.C. Plant

Mr. A. WOODBURN asked the Secretary of State for Scotland what steps he proposes to take to revise and accelerate the improvement of roads leading from the forthcoming British Motor Corporation factory to the docks at Grangemouth and Leith. He was told by Mr. J. S. MACLAY that the first task is with the roads round the site itself. West Lothian County Council has accordingly appointed consulting engineers to report on the improvements needed to trunk road A8 and the adjoining classified roads.

Shortcomings of N.W. London Road System

In an adjournment debate on March 2, Mr. R. RUSSELL drew attention to three cases in suburban north-west London where growth in private car and goods traffic seeking short cuts, or to avoid main roads, was imposing a heavy burden on minor roads. One instance was Sudbury Court Road, Wembley, which is used as a short cut between Greenford and North Wembley. Mr. Russell pointed out that Sudbury Court Drive, with a dual carriageway, was constructed for just this purpose but is not properly used because the proposed bridge over the London Midland Region line at South Kenton, to join Carlton Avenue West and East, has never been constructed. Instead, presumably, traffic goes via the partly unmade Sudbury Court Road and East Lane. Mr. JOHN HAY, the Joint Parliamentary Secretary, M.O.T., who replied, made no reference to the missing bridge.

No fewer than 47 companies from several European countries are said to have submitted tenders for the delivery of 90 coaches for the new underground railway in Oslo. The contract will be worth some £4 million and is to be carried out during the course of 1965.

Interfrigo, the international refrigerated rail wagon undertaking, has taken a further 500 wagons into its service. Of these, 450 are universal type refrigerated wagons and 50 are fish wagons. Further, some 300 new wagons, of the U.I.C.-O.R.E. all-steel type—a completely new development—are to be built for Interfrigo. One hundred of these will be fitted with interchangeable axles for traffic in and out of Spain. This brings the actual Interfrigo fleet up to 1,708 wagons and a fleet of as many as 12,000 refrigerated wagons at the disposal of Interfrigo member railways and their subsidiaries.

An Eastern Region consolidation scheme is taking place soon at Barnsley. Court House Station will be closed, a new junction and signalbox will be put in operation at Quarry Junction; Barnsley Exchange Station will be modernised; and local train and passenger facilities will be improved. Most of the work will be completed by April when, for the first time, through diesel services will be introduced from Sheffield to Wakefield and Leeds via Barnsley Exchange. The present services operate between Sheffield Midland and Barnsley Court House and between Barnsley Exchange and Leeds. The new through services will eliminate the inter-station transfer between Court House and Exchange and will reduce the overall journey time of diesel trains between Sheffield and Leeds by way of the Barnsley route.

FORTHCOMING EVENTS

- Mar. 14.—Inst. T. M. A. Cameron, "The Channel Tunnel," 68 Portland Place, W.1. 5.45 p.m.
- I.R.T.E. (West Regional). J. E. Johnson, "Wear and Tear (Part 2)." Liverpool Architectural Society's Rooms, Bluecoat Chambers, School Lane, Liverpool, 1. 7.30 p.m.
- B.I.R.E. (Radars). Discussion on "Short Range Navigational Aids." London School of Hygiene and Tropical Medicine, Keppel Street, Gower Street, W.C.1. 6.30 p.m.
- Mar. 15.—Inst. T. (Humber). M. A. Cameron, "The Channel Tunnel." Chamber of Commerce and Shipping, Hull. 7.30 p.m.
- R.Ae.S. Professor H. B. Squire, "Some Problems of Separated and Vortex Flow." 4 Hamilton Place, W.1. 7 p.m.
- I.T.A. Annual General Meeting (followed by discussion). Caxton Hall, Caxton Street, S.W.1. 6.30 p.m.
- Inst. C.E. Joint Meeting with the R.I.B.A. F. Gibbard and R. Nicholas, "Impact of Motorways on Cities." 68 Portland Place, W.1. 6 p.m.
- I.Loc.E. Annual General Meeting. Professor Dr. Ing. R. Rosen, "The Class 25 Condensing Locomotives on the South African Railways—Design and Operating Experiences." 1 Birdcage Walk, S.W.1. 5.30 p.m.
- I.R.T.E. (Eastern). V. E. Gough, "Air Suspension." Canteen, Eastern Counties Omnibus Co., Limited, Thorpe Road, Norwich. 7 p.m.
- I.R.T.E. (North Eastern). K. B. Hopfinger, "Turbo-charging Diesel-engined Road Vehicles." Three Tuns Hotel, Durham City. 7.30 p.m.
- I.R.T.E. (South Western). P. Bullock, "The 'N' type Injection Pump and Hydraulic Governor." Duke of Cornwall Hotel, Plymouth. 7.30 p.m.
- Mar. 16.—Inst. T. Visual Aids Meeting. Sir Arthur Kirby. View and discussion of films: "East African Industries—Copper," "The Cashew Nut Line," and "Opportunities for Employment." 80 Portland Place, W.1. 6.15 p.m.
- Mar. 17.—Inst. T. (Bournemouth-Poole Group). Short Papers by Students. Town Hall, Bournemouth. 6 p.m.
- I.R.S.E. R. H. Stapley, "Structure and Equipment Designs." Bristol Temple Meads Station. 6 p.m.
- R.Ae.S. M. H. Morgan, "Supersonic Aircraft—Promise and Problems." 1 Birdcage Walk, S.W.1. 6 p.m.
- W.R.L.D.S. F. D. Arney, "The Port of Bristol and Railways." H.Q. Staff Dining Club, Bishops Bridge Road, W.2. 5.45 p.m.
- D.E.U.A. C. L. G. Worn, "Factors Governing Turbo-charger Designs." 76 Mark Lane, E.C.3. 2.30 p.m.
- I.R.T.E. (Met.). H. L. Lyons-Jones, "Transport in Tripolitania." R.S.A. John Adam Street, Adelphi, W.C.2. 6.30 p.m.
- I.R.T.E. (Yorks). J. L. B. Crane, "Unusual Types of Trailer Suspension including Air Suspension." Great Northern Hotel, Wellington Street, Leeds 1. 7.30 p.m.
- Mar. 18.—Inst. T. (Lees-side). Paper by J. P. Currie. Cleveland Scientific and Technical Institution. 6.30 p.m.
- I.Nav. Dr. Hans Giesecke, "The American Air Traffic Control Programme." The Royal Geographical Society, 1 Kensington Gore, S.W.7. 8.15 p.m.
- Inst. H.E. (North Eastern). R. J. Orchard, "Mining Subsidies with Special Reference to Highways." University Science Laboratories, Durham. 7 p.m.
- April 19-21.—Scottish Road Passenger Transport Association. Conference at Turnbull.
- April 26-29.—Institute of Transport. Fortieth Congress, London.
- May 4-5.—Municipal Passenger Transport Association. Managers' meeting. Southampton.
- May 17-20.—Public Transport Association. Conference at Scarborough.



Maurice Holmes.

Mr. MAURICE HOLMES

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When Mr. Stanley Kennedy relinquishes the chairmanship of the Tilling Group Management Board at the end of this month he will, as already announced, be succeeded by Mr. Maurice Andrew Holmes, who has been an executive director of the board since October, 1955. Educated at Felsted School, Mr. Holmes, who is 48, joined Hicks Brothers, of Braintree, in 1931. Four years later that old-established Essex bus business was formed into a limited company and he was made general manager. After the 1939-45 war, in which he served in the Royal Army Service Corps with command of a Beach group company and later of headquarters transport in the Army of the Rhine (he was also mentioned in dispatches), he returned to Hicks Brothers. In 1946 he was appointed a member of the National Council for the Omnibus Industry and a member of council of the Public Transport Association. In 1948 he was called to the Bar by the Benchers of Gray's Inn and in the following year he negotiated the sale of the Hicks business to the British Transport Commission. Practising at the Bar from January, 1950, to October, 1955, Mr. Holmes appeared extensively in the traffic courts where, inter alia, he presented a number of applications from various Tilling companies to increase fares. In 1954 he was appointed by the Bar Council to the committee set up to advise the Minister of Transport as to changes in the Road Traffic Act. As already indicated he accepted an invitation from the British Transport Commission in October, 1955, and became an executive director of the Tilling Group Management Board. As such he has been chairman or director of a number of companies in the group including Midland General, Red and White, Thames Valley, United Welsh, Cumberland, Eastern Counties, Hants and Dorset, Southern Vectis and Wilts and Dorset. With his succession to the chairmanship of the board, he will relinquish most of these directorships and a number of such changes has already been announced. It has also been indicated that he will become chairman of the Bristol Omnibus Co., Limited, and its associated companies and of Eastern Coach Works, Limited.



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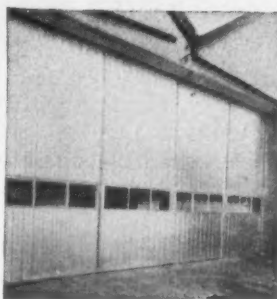
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LEIPZIG SPRING FAIR

Wider British Participation

FOR the first time, the British section of the Leipzig Spring Fair this year was organised under the auspices of the Federation of British Industries and, while the declared intention of the German Democratic Republic of placing orders with the capitalist countries worth DM750 million might not have been realised, there was wide British participation which will doubtless have brought useful contacts and led to substantial contracts. The F.B.I. pavilion had an information bureau providing details of an extensive range of British goods available for export to Eastern Bloc countries, which proved a useful and popular facility.

A fairly wide range of engineering and other products was entered on the shopping list of the East German Foreign Trade Organisation for purchase during the fair and a still wider range was listed for sale. Among the intended exports were a variety of machine tools, agricultural tractors and machinery, all types of road vehicles and railway stock, river and seagoing vessels, turbojet and piston-engined commercial aircraft and aero engines.

Among exhibitors from about 50 countries, the British contingent occupied an area of over 31,000 sq. ft., compared with some 21,500 sq. ft. at the 1959 show, and included such well-known firms as Imperial Chemical Industries, Hawker Siddeley, English Electric, Richard Thomas and Baldwins, Guest, Keen and Nettlefold, Automatic Telephone and Electric, Rootes Motors, Standard-Triumph, Massey-Ferguson, and Pye. The collective pavilion under the F.B.I. occupied twice the area of the last exhibition, covering over 16,000 sq. ft. and presenting the products of some 200 firms.

I.C.I. Display

Five I.C.I. divisions—Dyestuffs, Plastics, Heavy Organic Chemicals, Billingham and Pharmaceuticals—were represented in the British Pavilion. Dyestuffs Division, a pioneer in the synthetic dyestuffs field for more than 40 years and first in the field with reactive dyes, featured a large-scale display of fabrics dyed and printed with Procion and Procynil reactive dyes, as well as including a complete range of dyestuffs and pigments for the textile, leather and paints industries.

Catalysts for the heavy chemical industry were shown by Billingham Division, while Heavy

Organic Chemistry Division had a prominent display of products from its modern petroleum chemical plant on Tees-side. With other integrated I.C.I. plants, this forms the world's largest petrochemicals complex based on liquid feedstocks and produces an extensive range of tonnage organic chemicals, many of which, including some used in the manufacture of plastics, surface coatings, synthetic rubbers and paints, were featured at Leipzig. Plastics Division also demonstrated the wide diversity of its products, including Alkathene, Perspex, Melinex and Butakon, and their wide, applicational versatility from the production of domestic articles to electric cables and by the rubber, plastics, paint and paper industries.

All Fields of Power Engineering

Hawker Siddeley Brush International, Limited, is the export organisation for various companies of the Industrial Division of the Hawker Siddeley Group, namely, Brush Electrical Engineering, Mirreles, Bickerton and Day, Limited, National Gas and Oil Engine, Petters, Fuller Electric, Hawker Siddeley (Hamble), Hawker Siddeley Brush Turbines, and Bryce Berger, all of whose products were represented at the fair.

Brush Electrical Engineering Company's exhibits included models of two diesel-electric locomotives—the 1,000-h.p. locomotive, 25 of which are in operation on the Ceylon Government Railways, and a 550-h.p. shunting engine—a portable vibration meter and an automatic voltage regulator for the automatic control of voltage within fine limits. Hawker Siddeley Brush Turbines displayed a sectioned model of the Series MB20 turbocharger, while Bryce Berger showed a range of Bryce fuel-injection pumps, nozzles and holders suitable for diesel engines of up to 1,000 b.h.p. per cylinder.

Hawker Siddeley (Hamble) featured the licence-manufactured Thermo King KL20 mobile refrigeration unit, a medium-duty machine suitable for installation on trailers with close-coupled tractors. Operation of the unit is fully automatic and the cooling coil is defrosted at predetermined intervals. Power for the unit is supplied by a petrol engine and there is a 5-h.p. electric motor for standby operation.

Mirreles, Bickerton and Day, which company built the first Diesel licence engine in Britain and the third Diesel engine in the world, showed models

of marine propulsion engines—a KSDM7 direct reversing turbocharged unit developing 895 s.h.p. at 250 r.p.m., such as is in service with many trawler fleets, and a Monarch six-cylinder vertical in-line four-stroke direct reversing engine of 2,600 s.h.p. at 300 r.p.m. These engines, the latest in the Mirreles propulsion range, are also built in sizes with a power output up to 4,340 s.h.p. and have been developed to meet the exacting operational requirements of distant-water trawlers, coasters, freighters, dredgers and tugs. The display was completed by a selection of the air-cooled diesel engines of low horsepower from the Petters and Armstrong Siddeley ranges and photographs representing those of the company's products too large for exhibition purposes.

Automatic Telephones and Communications

Exhibits of Automatic Telephone and Electric Company included a range of private automatic branch telephone exchanges, one of which incorporated a new cordless manual switchboard dispensing with jacks, cords and plugs, and a 50-line private automatic telephone exchange employing extension telephones of new design in a wide range of colours. A five-station intercom system, providing communication facilities between the five stations and also to an exchange (public or private) via two exchange lines, was also shown. Signalling and control equipment featured comprised a shaft signalling system for the automatic transmission of visual signals and audible code signals controlling the raising and lowering of the cage in collieries; a road traffic signal controller incorporating speed-timing of vehicle extension periods, variable minimum green and other facilities, which is now being employed on new installations in this country; a simple two-phase signal controller for pedestrian crossings; and a system of general indicating, telephone and telemetering equipment for electricity generation and distribution networks.

Cooper Roller Bearing Company, while not showing any of its very large bearings, had a special marine display model that comprised a marine propeller shaft and propeller with Cooper roller bearings demonstrating their application to standard marine shafting. The principle and various applications of this company's split roller bearings in marine drives, connecting rod ends and so on were well shown on the stand and in a working model that automatically dismantled and reassembled a bearing in its pedestal.

Holt Products

The unique range of automotive chemical products, almost certainly the most comprehensive and widely used in the world, manufactured at New Addington, Surrey, by Holt Products, Limited, was shown by the company at Leipzig.

Such old favourites as Wonderweld, Radweld, Gun-Gum, various cleaners, polishes, the Cataloy group and so on were joined on the stand by newer products of interest in several spheres other than road vehicle applications. Holt remedial treatments are available for such troubles as cracked cylinders and water jackets, leaking radiators and exhaust systems, worn cylinder bores, surface cuts in tyres, split battery cases, rusted screw threads and other parts, leaking windows, squeaking water-pump glands, frosted windscreens and door locks, damaged coachwork and so on.

Among the newer products displayed at Leipzig was a Holt's glass fibre-resin skinning or sheathing process developed for boat hulls, decks and cabin tops. It is claimed to be a simple process, which can have colour impregnated into the materials, increases structural strength, reduces maintenance to a minimum, is extremely hard wearing and discourages fouling. Other recent products shown were Battery Flush, for removing sulphation and sludge deposits from a failing lead-acid battery; heavy-duty hydraulic brake and clutch fluid, which operates satisfactorily over a temperature range from minus 60 to plus 330 deg. F.; Fog Cote, a brush-on amber coating for headlamps and as an anti-dazzle coating on windscreens and rear windows; Hi-Moly, a molybdenum disulphide anti-friction oil additive, and various other preparations.

Napier Deltic

A full range of products was represented on the stand of D. Napier and Son, Limited, comprising Elan and Gazelle gas turbine engines, Deltic diesel engines, turboblowers for diesel engines, Spraymat and Sierracote de-icing and de-misting systems, and Napiercast precision castings. A quarter-scale 18-cylinder high-speed marine Deltic shown indicated the remarkable performance of this unique engine, which in its turboblow form has a maximum output of 3,100 b.h.p. and a continuous rating of 2,400 b.h.p. At continuous power, fuel consumption is 0.417 lb. per b.h.p.-hr. and the net dry weight of the engine complete with gearbox, mounting feet, exhaust manifolds, piping, turbocharger, air starting valve and distribution piping is only 12,700 lb. The overall length is 155 in. (393.0 cm.).

Turboblowers exhibited included the new Type CO45 which will shortly be marketed, bringing the range of Napier turboblowers up to eight basic frame sizes. These machines operate up to 2.5 to 1 compressor delivery pressure ratio at continuous rating and higher pressures for limited periods, covering a free air capacity range from 0.155 to 4.6 cubic metre per sec. for powers from 100 to 300 h.p. and up to 2 to 1 pressure ratio (continuous) for engines up to 600 h.p. Napier turboblowers have been on the market for more than 10 years and have been supplied to users in no fewer than 90 different countries for most leading makes of engine.

Gas Turbines

Scale models of the Elan and Gazelle gas-turbine engines, which power various British and foreign helicopters and fixed-wing aircraft, were on show, the Elan versions with maximum power of up to 3,500 e.h.p. and the Gazelle in powers up to 1,800 e.h.p. Napier Spraymat electrical heater mat system, which is in extensive use in the protection of civil and military aircraft components against the dangers of ice formation in flight, was displayed on the stand in company with Sierracote, a transparent conductive coating used for heating aircraft windscreens and cockpit canopies when de-icing or de-misting is required, handled by Napier in Europe for the producer, Sierracin Corporation, Burbank, California. The display was completed by a full range of exhibits illustrating the work of the Napier investment casting foundry. Types of Napiercast components already supplied to the aircraft and allied industries were on show, illustrating the tendency towards larger and more intricate forms, which are now being produced in most of the high-temperature heat-resisting steel alloys.

Among the road vehicles on display were a Herald saloon and Atlas Kenex caravan shown by Standard-Triumph, which company was the first British car manufacturer to exhibit at Leipzig since the war, and a Minx saloon, a Commer 12-seat bus and a Commer 7-ton lorry powered by the Rootes multi-fuel engine by the Rootes Group, which is exhibiting at the fair for the fourth successive year.

ROOTES DEBUTANTES

Restyled Husky and Cob at Geneva

AMONG more than 50 Rootes Group cars and commercial vehicles now on the Continent for display and demonstration at various European exhibitions are new versions of the popular Hillman Husky dual-purpose vehicle and Commer Cob 7-cwt. van, both of which made a first public appearance at the Geneva Motor Show this week. In the main, changes have been made to styling, with a particular eye on safety and silence; the Rootes 1,390-litre four-cylinder petrol engine is used in both vehicles, with 7 to 1 compression ratio and a maximum output of 47.5 b.h.p. in the Cob and 8 to 1 compression ratio developing 51 b.h.p. in the Husky. The high-compression engine is available optionally in the Cob van.

In both cases the latest Hillman Minx four-speed synchromesh gearbox is used, with well-matched close ratios and a short floor-mounted gear lever. Styling changes include a larger windscreen and thin pillars, giving a 21 per cent increase in windscreen area; larger windscreen wipers; deeper glass in the rear doors; a lower roof line and new ribbed roof panel, for maximum stiffness and to reduce noise, with projecting front and rear edges to protect the windscreen and rear window; a new radiator grille; and headlamp cowls to prevent backward glare in misty conditions.

The price of the new Cob 7-cwt. van is £430, while the Hillman Husky, which can carry four adults and 300 lb. of baggage or 750 lb. of freight with driver only, costs £674 0s. 10d., inclusive of £199 0s. 10d. British purchase tax.

Simmonds Aerocessories, Limited, a member of the Firth Cleveland Group, has introduced a solenoid-operated valve for installation in liquid-carrying pipelines. Its purpose is to start or stop the flow of liquid in a pipeline by the establishment or failure of the electric current. One important application of such a valve is its closure to keep a pipeline full of liquid in the event of current failure to a pump motor. The Simmonds valve is available for operation from d.c. or a.c. supplies; both flame-proof and non-flameproof versions are available in high-tensile aluminium alloy or forged steel.

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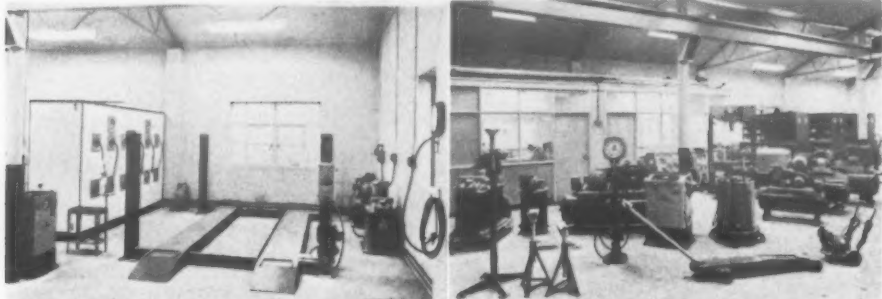
New Bristol Depot for Laycock Engineering

SITED on a rapidly developing trading estate on the northern outskirts of Kingswood, Bristol, a new western area sales and service depot has been built for the Garage Equipment Division of Laycock Engineering, Limited. The depot, at Bridge Road, off Station Road, Kingswood, was formally opened on March 3 by Mr. H. E. Hill, chairman of Laycock Engineering, Limited, and chairman of Birfield, Limited, parent company of the Birfield Group, at a ceremony attended by the Chairman of Kingswood Urban District Council and other local dignitaries.

Opening of the new depot marks the first stage of providing improved sales and service facilities throughout Great Britain for this division of Laycock Engineering, Limited, Sheffield. Manager of the division, Mr. Frank Oldfield, recently stated

Felco travelling hoist. Office accommodation is incorporated into one corner and is extended outwards with a flat roof. On one side, the flat-roofed area also houses a thermostatically controlled Waterbury oil-fired boiler, which ducts warm air to the offices and main building.

Part of one side of the depot houses bin storage for small parts and spares and adjoins the main dispatch area. The opposite side is intended for heavy stores and the intention is that the central bay will be kept clear for transport and delivery purposes. Nevertheless the centre bay has one of the new Laycock Hydrajig hydraulic lifts set flush into its floor. This new lift, designed to give the garage man the last word in speedy lifting equipment, enables a vehicle to be raised, wheel free, in 30 sec., and when used in conjunction with the



A typical service bay equipped with Laycock products, including a 3-ton Corolift, a six-bay Lubay installation, an Airpoise tyre inflator, a one-gun Merlin washing plant, a 9 cu. ft. air compressor and a Laycock-Hofmann wheel balancer; right: part of the display section in the new depot showing Laycock washing plants, axle stands, tyre inflators, compressors, wheel balancers, mobile greasers, jacks and presses

at the company's headquarters in Sheffield that during 1960 new or enlarged premises would also operate in London and Glasgow.

Service Area

The Bristol depot comprises a sales and service centre for the western area, which covers Hampshire, Dorset, Isle of Wight, Channel Isles, Wiltshire, Gloucestershire, Somerset, Devon, Cornwall, South and West Wales, and Eire. Under the control of Mr. F. A. Thiel, it handles not only sales and service requirements but incorporates demonstration facilities as well as a store from which distribution can be carried out. Already a large proportion of the units comprising the Laycock garage equipment range can be supplied from area stores and it is anticipated that by mid-1960 it will be possible to supply nearly all items from stock.

Laycock's Bristol depot is sited on an area of one-third of an acre and has covered accommodation amounting to 3,615 sq. ft. A central entrance with roller shutter doors leads to the main depot area formed into three main bays, the centre of which incorporates a full-length gantry for a 1-ton

Hydrajig Mopal—a mobile pallet designed by Laycock Engineering—allows vehicles to be moved away from the lift while in their raised position, so freeing the lift for further use.

Display units and a garage service demonstration bay are located near the main entrance of the depot. The display section is adjacent to the offices and shows static examples of Laycock compressors, washing plants, presses and jacks as well as a display panel exhibiting the complete range of Laycock accessories and small garage requirements. Facing the offices is a demonstration service bay arranged to show various Laycock units in operation. Centrally sited in the bay is an example of the new 3-ton Corolift, an electrically operated four-post lift which requires no excavation yet provides for full vehicle servicing at any height up to 5 ft. 3 in. Adjacent to the Corolift is a six-panel Lubay installation to deal with greasing and oil replenishment, two of the panels incorporating oil meters. This Lubay installation enables a variety of methods to be fully demonstrated.

Also grouped around the servicing bays are other items of Laycock manufacture considered essential (Continued on page 14)

Snowplough-Gritters

FOR USE ON MOTORWAYS

SEVEN specially-designed bulk gritting vehicles, which can also be fitted with snowploughs at the front end, have been ordered from Scammell Lorries, Limited, by the Ministry of Transport for use on motorways. They have been designed for operating speeds of up to 40 m.p.h. The bodies and gritting equipment are being supplied by Atkinson Agricultural Appliances, Limited.

Before ordering the new vehicles, Ministry officials studied snow clearing and gritting, and the types of equipment used, in the U.S.A., Canada, Switzerland and Scandinavia. A vehicle was then planned which would have to meet several exacting

Power is provided by a 160-b.h.p. Leyland O680 diesel engine with hydraulically operated clutch. Two hydraulic pumps are fitted on the engine, one belt-driven for the hydraulic power-assisted steering and the other driven from the timing gears for operating the spinners in the body for distributing grit or salt. The air compressor mounted on the engine draws its air from the main engine air filter trunking through an alcohol anti-freezer, which prevents the air-pressure system freezing up.

Air-pressure power braking operates on all wheels from the pedal, or alternatively from a hand reaction valve on the steering column. The



One of seven specially designed Scammell 8 by 6 gritter snowploughs bought by the M.O.T. for service on motorways

requirements, such as exceptional reliability, a high degree of manoeuvrability and stability on treacherous road surfaces, maximum visibility and so on. The ability to operate at high speed was considered to be very important, as otherwise attempts would be made by traffic to overtake the gritter. As all these requirements could not be met by a standard machine available in this country or overseas, the Ministry consulted Scammell Lorries, Limited, and the rigid eight-wheeler with drive to three axles was evolved.

Designed to carry 13 to 14 tons of grit or salt, the vehicle is fitted with mounting brackets at the strengthened front end for the attachment of snowplough blades. The leading axle and the two forming the rear bogie are driven; the drive to the front axle can be engaged or disengaged on the move. Transmission comprises 12 forward and two reverse speeds through a six-speed main gearbox with a two-speed transposing box, which provides the drives for the front and rear axles.

Incorporated in the transposing box is a power take-off used for driving the continuous moving belts in the gritter body. It is capable of transmitting full engine torque in any of the gearbox ratios; the running speed of the belts is related to the vehicle road speed.

pedal actuates a dual-control valve which is coupled to two separate systems, each with its own reservoir, serving the brakes on the first and third and the second and fourth axles respectively; in the event of a pipe failure full braking on two axles is still operative. Buzzers automatically give warning of low air pressure.

Cab Comfort

The semi-forward-control cab is of unusual design, featuring reverse-slope two-piece opening windscreen. The mudguards over the two front axles are extended behind the wheels to frame level and prevent any mud or slush being thrown up by the wheels into the engine compartment. Highly efficient heating and demisting equipment is built in and seals around the stems of the controls eliminate draughts. Two heavy-duty air-operated windscreen wipers are fitted on the top of each screen and an air-operated washer can also be directed on to each screen.

The exhaust is taken up and discharged at the top of the cab to avoid water and slush, and a spring-loaded towing hitch is fitted at the rear of the chassis. The Scammell vehicle is finished in bright yellow chlorinated rubber paint to give protection against the effects of salt.

BARIMAR Scientific Welding Salvaged Giant Shearing Machine



The owners of a big shearing machine were faced with a critical situation when the 4-ton body of this machine was broken in two places. They had two alternatives—should they (1) Sanction the expense of a new machine, or (2) Ask Barimar to repair the broken body of the present one? The firm decided on the sensible thing—Barimar was asked to put the casting right again. Far less expense, and it was done "In double-quick time!"

The damage was extensive, as the illustration shows; two large pieces were broken away, and the metal was up to 4 inches thick. The fractures were several feet long, and the broken pieces had to be replaced exactly in position, strongly welded. Various parts of the casting were also re-machined to an exacting accuracy. The welding completed, the casting was rigorously tested for strength, and finally tagged with the famous Barimar Money-back Guarantee.

The repair was urgent, for this was a "key" machine employed by the owners—a firm of iron and steel merchants—to cut large sections of metal to size. The repaired casting was returned to them by Barimar in record time, thus avoiding a serious hold-up in the deliveries of their steel orders.

This four-ton job is a typical example of the Barimar Scientific Welding Repairs Service.

In cases where it is difficult to transport damaged machinery Barimar "Flying Squads" will tackle repairs "on-site," any time, anywhere—thereby reducing hold-ups to the minimum.

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CYLINDER HEADS: Broken and cracked heads, cracked water jackets, cracked or worn valve seats, chipped, warped or damaged faces, broken rocker standards, defective camshaft bearing housings, cracked stud holes, stripped plug threads. IRON OR ALUMINIUM.

CRANKCASES: Fractures caused by broken connecting rods and run big ends, broken-off bearing arms, smashed sumps, cracked stud housings, broken bearing and flywheel housings, stripped drain-plug threads. IRON, ALUMINIUM OR ELECTRON.

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TRANSMISSION: Cracked or broken gearbox and axle casings, damaged gear teeth, worn splines and tapers, fractured shafts, cracked differential casings.

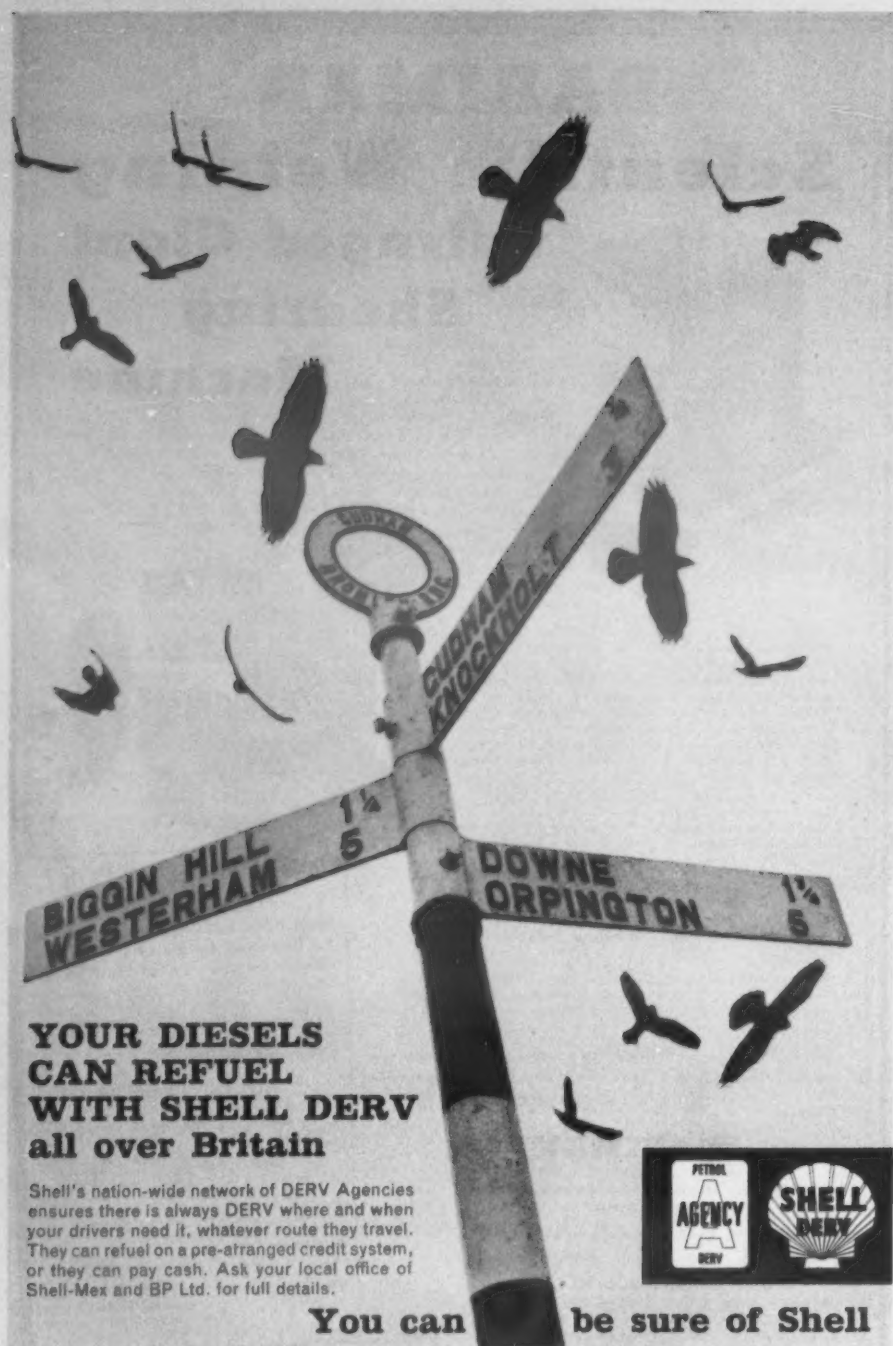
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BOOK NOTICE

Motor Business

MOTOR BUSINESS. No. 21. (London: The Economist Intelligence Unit, Limited, 22 Ryder Street, S.W.1.) Contents of No. 21 of this series of bulletins include comprehensive surveys covering the outlook for the United Kingdom motor industry; the long-term demand for cars in the home market; the United States car industry; and the British industrial and marine diesel engine industry. The first article concludes that the domestic demand for commercial vehicles, particularly medium and heavy classes, should remain at a high level and that there is likely to be some expansion of both commercial vehicle and tractor exports, total production in 1960 reaching respectively some 385,000 and 165,000 units. Some recovery of the domestic market for industrial diesel engines, which has been depressed during the past three years, is also thought to be likely, but export markets are expected to become increasingly important for manufacturers of these units and stiffening of American and Continental competition is foreseen. The charts in this issue of *Motor Business* give commendably clear information on relative strengths of car and commercial vehicle exports from the principal producing countries to various important markets.

GARAGE EQUIPMENT

(Continued from page 13)

to the service garage. They include an Airpoise wall gauge for tyre inflation, covered hoses, a 9 cu. ft. compressor for supplying compressed air to the Lubay and Airpoise units and a one-gun Laycock Merlin high-pressure vehicle washer.

In its latest form the Merlin provides a water output at 375 p.s.i. and this output can be controlled by the washing gun to provide an infinitely variable range of sprays—from a penetrating jet to a mist—so catering for every application that is likely to be met in vehicle washing. Another advantage of the Merlin washing plant is that it can be connected by pipeline to remote washing points without pressure drop. To demonstrate this facility a pipeline has been installed at the Bristol depot so that a second outlet is provided some 60 ft. distant from the plant itself.

Wheel Balancer

The workshop bay is completed by a Laycock-Hofmann wheel balancer, an item of equipment that is becoming recognised more and more as essential to garages wishing to provide complete and satisfactory service. Wheel balance is a factor that has until recently been considered a refinement, or necessary only on high-performance cars, but now it is realised that not only can many irritating vibrations be overcome by correct wheel balance but a far better ride can be obtained.

The desirability of wheel balancing on commercial vehicles is now becoming recognised and is perhaps of even greater importance than on cars. Heavy wheels badly out of balance cause rapid wear of tyres, wheel bearings and steering mechanism as well as making a vehicle more difficult to control. The Laycock range of wheel balancers includes the Model ER-Commercial, designed for checking and correcting both dynamic and static balance of commercial vehicle wheels.

ROAD HEATING CABLES

For Edinburgh

TRAVERSING a steep incline in the picturesque setting of Princes Street Gardens, Edinburgh, the Mound has for some time been recognised as a potential hazard to vehicles in bad weather conditions. In order to reduce the danger from ice and snow, the surface of the Mound has been underlaid with a special road-heating system for which purpose British Insulated Callender's Cables Panelec heating cables have been used exclusively. An added advantage will be the saving of considerable expenditure incurred in gritting and salting.

The system, which is one of a series of systems of the Panelec Heating Division of British Insulated Callender's Cables, Limited, is controlled automatically by moisture detectors, frost penetration indicators and temperature sensing units in the roadway and by similar units working in conjunction with air thermostats and snow detectors on a special control plinth. In all some 448 cables have been used. The Panelec system was specified after sample cables had undergone the necessary field trials to establish loadings.

The project was designed by the city engineer of Edinburgh, Mr. W. P. Haldane, in conjunction with the South of Scotland Electricity Board and the installation of the cables was carried out by William Allan Smith and Co., Limited.

COMPUTER IN PRODUCTION

I.M.E. Discussion

AN informal discussion on "The Computer in Production" is being arranged by the Institution of Mechanical Engineers. The purpose of the meeting is twofold: to introduce chartered mechanical engineers and managers to the latest techniques involving the application of computers in production, and to provide a forum for managers, engineers and users to present their views to manufacturers of computers. The meeting will be held on Monday and Tuesday, March 21 and 22, 1960. Several distinguished engineers and users of computers will give talks on the subject; the discussion will be informal and will not be reported. Visits to computer centres and to installations where computers are being used on production problems will also be arranged.

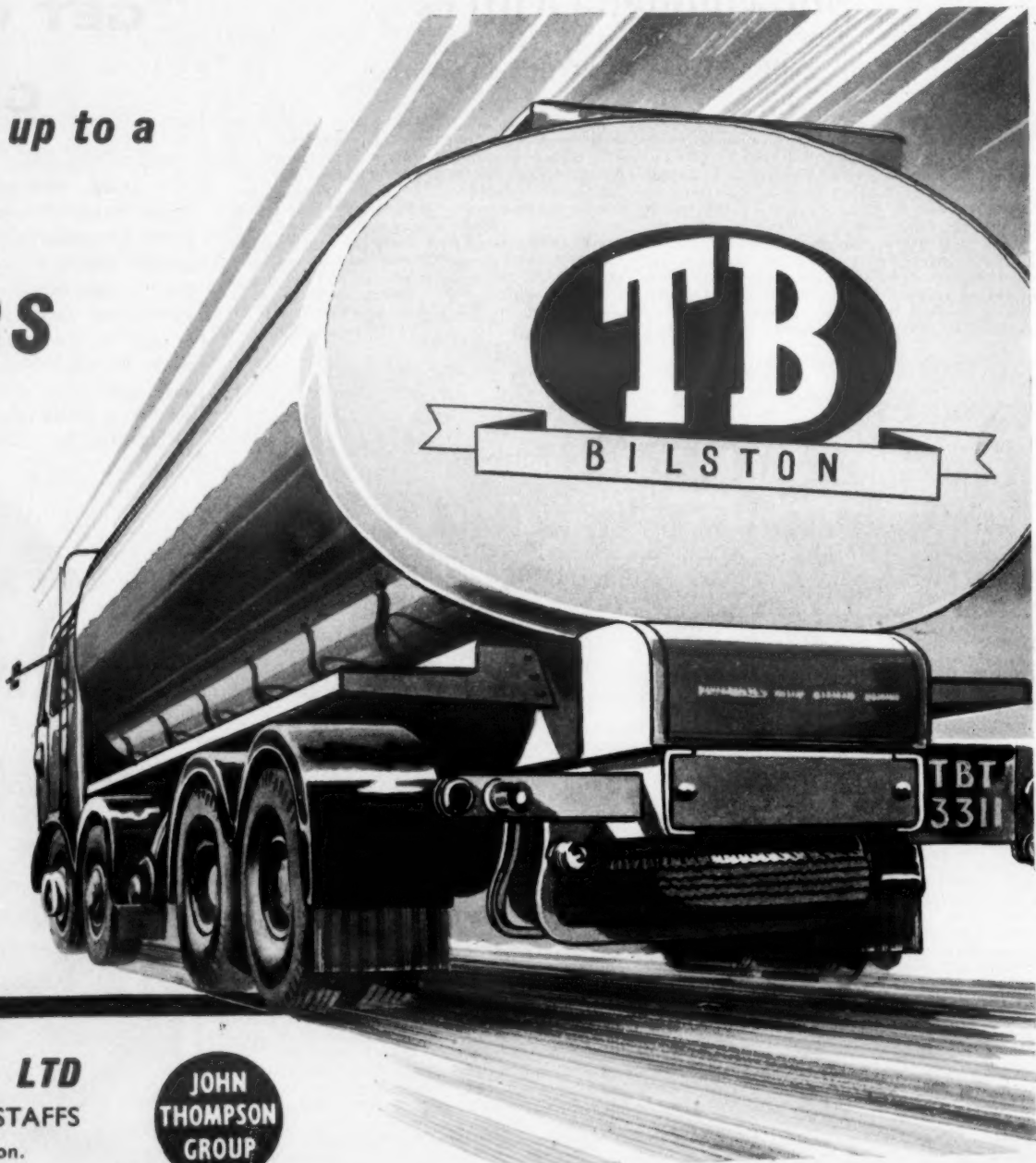
The meeting will be open to members and visitors; although it is aimed primarily at management level, the subject treatment is also likely to be of interest to specialists in computers. Mechanical engineers are employed in a very wide range of industries and there is every indication that a forum is needed for a discussion on computers in production in its widest sense. Those wishing to attend should apply to the secretary of the institution at 1 Birdcage Walk, London, S.W.1.

Simmonds Aerocessories, Limited, Treforest (a member of the Firth Cleveland Group) has formed a company in Western Germany in association with Mecano-Bundy, G.m.b.H., Heidelberg, for the manufacture and sale of Spire Speed Nuts and other fastenings. The new company will be named Mecano-Simmonds, G.m.b.H., with headquarters at Heidelberg.

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SOCIAL AND PERSONAL

Visit to Clyde Shipyards

AS one of a series of visits to the principal ship-building areas of Britain which he is making at the particular request of the Minister of Transport, Lord Chesham, the Joint Parliamentary Secretary, was to visit Clyde shipyards this week. His itinerary included John Brown (Clydebank), Barclay Curle at Elderslie and Clydeholm, A. and J. Inglis (Pointhouse), Harland and Wolff (Govan), Fairfield Shipbuilding, Alexander Stephens, the Clyde Navigation Trust at Govan dry docks, Charles Connell, Yarrow, and Blythswood Shipbuilding.

An honorary degree of doctor of law has been conferred by Dublin University on Mr. C. O. Stanley, chairman of the Pye group, also on Mr. J. Leydon, chairman of Aerlinter, Eireann. Miss T. J. Beere, Secretary of the Department of Transport and Power, is a third recipient of this degree. Mr. Stanley was born in Waterford County.

Mr. J. E. Hollands, chief engineer of the North Western Road Car Co., Limited, as already announced, has been appointed group engineer to Canadian Motorways, Limited, the B.E.T. company whose trucking and household moving activities are spread over the whole of the Canadian continent. Mr. Hollands, whose headquarters will now be in Toronto, has been responsible for the maintenance of a fleet of 600 buses and coaches since he joined North Western about five years ago. He was previously rolling stock engineer with the Birmingham and Midland Motor Omnibus Co., Limited. He served an apprenticeship with A.E.C., Limited, at Southall, and has been engaged in the transport industry for the past 15 years.



Mr. J. E. Hollands

We regret to record the death of Mr. A. L. Yarranton, of Eardiston, Tenbury Wells, founder, in 1919, of Yarranton Brothers, which operates stage services in north-west Worcestershire.

The Road Haulage Association has now advertised the post of chief executive officer and secretary, which is vacant due to the death of Mr. R. Morton Mitchell.

The next president of the Institute of Shipping and Forwarding Agents is to be Sir John Brocklebank, chairman of the Cunard Steam Ship Co., Limited. The chairman-elect is Mr. J. F. R. Scott.

Mr. Edward P. Connolly, F.I.B.C.M., a director of Connolly Brothers (Carriers), Limited, has been re-elected president of the Institute of British Carriage and Automobile Manufacturers.

The death has occurred of Mr. C. N. Gallie, who was formerly general secretary of the Railway Clerks Association, now the Transport and Salaried Staffs Association. He was 73.

The Cunard Line announces that Captain D. N. MacLean, D.S.C., R.D., R.N.R., has been appointed commodore of the fleet in succession to Captain G. H. G. Morris, who retired on February 29.

The annual dinner of the Tees-side section of the Institute of Transport took place on February 26. The president, Mr. Reginald G. Groult, responded to the toast "The Institute of Transport," proposed by Mr. L. N. Brocklehurst. "The Guests" was proposed by Mr. E. McClelland, and Mr. R. A. Mason, president, Tees Shipping Association, responded. Mr. D. S. Deacon, M.Inst.T., chairman of the section, presided.

We record with regret the death of Alderman F. H. Wort, J.P., a freeman of Salisbury, president of the Commercial Motor Users' Association in 1932-33. He was 81. The firm of Wort and Way, with which he was associated, was in earlier days a government contractor which claimed to have supplied the first mechanical road transport for army manoeuvres; in 1931, for a test mobilisation at Aldershot, all the vehicles supplied were for the first time on pneumatic tyres.

On March 14, Mr. M. A. Cameron, principal officer (administration), British Transport Commission, will lecture to the Institute of Transport at 5.45 p.m. in the Jarvis Hall, Royal Institute of British Architects, 66 Portland Place, W.1, on the Channel Tunnel. The meeting is open to visitors, without ticket. Sir Arthur Kirby, Commissioner for East Africa, will introduce three films on East Africa at a visual aids meeting of the Institute at 80 Portland Place, W.1.

Mr. James H. Young, who has been appointed district traffic superintendent, Aberdeen, Scottish Region, entered the service of Cowan and Company, the railway carting agents and long-distance haulage contractors, in 1929. He was a unit controller during the 1939-45 war and when Cowan was nationalised he was appointed district traffic superintendent, Dundee district, Road Haulage Executive. In 1951 he was appointed to the traffic costing section, Scottish Region. In 1955 Mr. Young was appointed sales assistant to the chief commercial manager, Scottish Region, and has recently been acting as district commercial manager, Dundee.

Sir John Benstead, deputy chairman of the B.T.C., was the principal guest of the Derby Railway Engineering Club at its annual dinner held at the Railway Institute in Derby. Also among the guests were two former chief mechanical and electrical engineers at Derby—Mr. H. G. Ivatt and Mr. J. F. Harrison, who is now c.m.e. of the B.R. central staff. Sir John Benstead proposed the toast "The Club," and the response was made by the president, Mr. A. E. Bates, carriage and wagon works manager, Derby. "The Guests" was proposed by Mr. A. E. Robson, chief mechanical and electrical engineer, London Midland Region, B.R.

The death is announced of Mr. R. H. Cubbin, a former secretary of the Manx Highway and Transport Board. He was 87.

The death has occurred of Mr. Thomas L. Rankin, of East Kilbride, aged 74. In partnership with two brothers he founded the business of Rankin Brothers in 1919, and they started a bus service between Glasgow and Stirling. Later they added services to Dumbarton, Balloch, Balfour, East Kilbride, Strathaven and other centres.

Unforeseen circumstances have arisen in Germany which will prevent the convention of the Railway Students' Association being held during the period originally envisaged. A very cordial invitation has, however, been received from the German Federal Railway inviting members of the Association to visit Hanover in September and this has been accepted. The party will now leave London by the night service via Harwich on Sunday, September 25, visiting the Barmen-Elberfeld suspended railway on the way. The return journey will commence on the night of Saturday-Sunday October 1-2.

Mr. G. A. Major, who is joining the board of Red and White Services, Limited, and will become general manager on April 1, has been associated with the Red and White group since 1930. He was, in fact, appointed a director and secretary of Red and White Services in 1946 but relinquished the former office upon its acquisition by the British Transport Commission in February, 1950. He was also secretary to a number of the Red and White United Transport (now United Transport) subsidiary companies.



Mr. G. A. Major

The appointments of Mr. Edward A. Ryder as deputy vice-president of traffic and Mr. George R. Johnston as general freight traffic manager have been announced by Canadian National Railways.

The Rhondda Transport Co., Limited, announces that Mr. L. B. Beynon, A.C.A., who is at present a member of the staff of Peat Marwick Mitchell and Company, at Swansea, has been appointed, with effect from April 1, secretary-accountant of the undertaking.

The Minister of Transport has been informed by the British Transport Commission that in place of the late Mr. F. Grundy it has nominated Mr. E. W. Arkle (chief traffic officer, British Railways central staff) to the Coastal Shipping Advisory Committee, set up under section 71 of the Transport Act, 1947.

Charles Rickards (Travel), Limited, of Paddington, announces that Mr. L. Dorfman is now managing director and that Mr. John May has joined the company as sales director. Mr. E. G. Wilson continues as general manager. This old-established travel agency plans to expand its service to business houses and private clients. It will also develop inclusive tours to destinations old and new commencing this summer. It is also planned to offer a special air-chartering service.

The London Midland Region has announced the following staff appointments:

Mr. H. Wilkinson to be assistant (wages staff) regional establishment and staff office.
Mr. J. W. Caldwell to be chief technical assistant (inspection), chief mechanical and electrical engineer's department.
Mr. S. Grunberg to be assistant new works officer, chief civil engineer's department, Easton.
Mr. E. V. Hughes to be assistant new works officer, chief engineer's department, Manchester.
Mr. C. R. Stuart to be assistant district goods manager, Birmingham.
Mr. K. R. Brown to be assistant electric traction engineer, Rugby.

An original method of proposing "The Guests" was chosen by Mr. G. Armstrong, general manager, Southampton Corporation Transport and chairman of the section, at the annual dinner of the Southern section of the Institute of Transport, held at Lyndhurst on March 5; he did it mainly in verse. In welcoming the president, Mr. Reginald G. Groult, chairman and managing director of the General Steam Navigation Company, Mr. Armstrong made the point that he also was in that line of business as general manager of a shipping line which plied from Southampton to the foreign port of Woolston. In a witty reply, Mr. Groult mentioned that in its 40th anniversary year the Institute had over 10,000 members; it was the hard work of the sections which made the Institute possible and with great sincerity he brought them the thanks and congratulations of the council. A pleasing feature was the presentation of a token of esteem to Mr. G. A. J. Starke, the retiring hon. treasurer of the section. Among the guests were Mr. F. T. West, principal, Southampton Technical College, and Mr. H. Crawford, vice-principal, Bournemouth Municipal College.

ROAD-RAIL CO-ORDINATION

(Continued from page 5)

fanciful picture. In the United States "piggy-back" trains are common enough and although we cannot move ordinary road trailers in this country, owing to our small loading gauge, containers are a good substitute. The success of this system depends ultimately upon the extent to which gains in time and cheapness on the trunk haul outweigh losses of time and transfer expenses at the exchange depots.

Admittedly our country is too small and many movements too short for the cheapness of trunk haulage by rail to be decisive all the time, but there is a very great volume of traffic which could be carried more cheaply in this way than by road throughout. In the background is the road-rail transferable trailer, which is being developed in this country from an experiment in the United States. I have the highest hopes of this project because the concept is of a road trailer adapted to run on rails instead of the other way round. If it succeeds it could revolutionise the approach to through road-rail movement, for transfer expenses and the risks of damage to merchandise en route would be reduced almost to nothing. Considerable flexibility in railway operating methods would be needed to handle Talgo-type vehicles, but I would not regard that as unattainable.

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Duties will embrace the advising of management on all matters of transport policy, including vehicle types, replacement, operational schedules and the training of transport staff. The person appointed will also be responsible for the mechanical maintenance of all commercial vehicles and for the servicing at Headquarters of Directors' and Senior Executives' cars.

A substantial salary will be paid, commensurate with the experience sought. This senior appointment carries non-contributory pension and life assurance.

Full particulars of age, education, qualification and experience should be addressed to Box No. 3829, Modern Transport, 3-16 Woburn Place, London, W.C.1.

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IMPORTANT CONTRACTS

More Mammoth Majors for B.R.S.

ONE of the biggest users of A.E.C. lorries on general haulage work, British Road Services has placed further orders for the popular Mammoth Major recently. A total of 27 has been ordered, of which 22 are the new Mk V eight-wheel chassis with retracted front axle and the balance the six-wheel design. All the vehicles will be powered by the A.E.C. AV590 six-cylinder 9.6-litre diesel engine, which develops 125 b.h.p. at 1,800 r.p.m. From South Africa, orders for no fewer than 80 passenger and goods vehicles were received in one week by A.E.C. Limited, through A.E.C. Vehicles (S.A.), Limited. These included Regal Mk IV heavy-duty and Regal Mk V single-deck passenger chassis and six- and eight-wheel Mammoth Majors and the Mandator tractors. During the same week orders for 33 A.E.C. heavy-duty goods vehicles were received from Australia, A.E.C. (Australia) Pty., Limited, ordered six bonneted Mammoth Major six-wheelers and 27 forward-control Mammoth Major six-wheelers. A repeat order for three M.C.W.-bodied A.E.C. Regent Mk V 67-seat double-deck buses has also been placed with A.E.C. by the municipality of Angola, Portuguese West Africa, which has a modern fleet of Regal vertical-engine single-deckers and three 30-ft. long double-deckers similar to those now ordered already in service.

Marconi Radar for R.R.E.

The Ministry of Aviation, acting on behalf of the Royal Radar Establishment, Malvern, has placed an order with the Marconi Company for the supply and installation of a 50-kW. 50-cm. airfield control radar at the R.R.E. airfield at Pershore, Worcestershire.

Albion Fuel Tankers Ordered

A contract worth over £280,000 has been placed by Shell-Mex and B.P. Limited, with Albion Motors, Limited, for a large fleet of eight-wheeled Albion Caledonian tanker chassis. These are to be fitted with 4,000-gal. aluminium tanks built by Alfred Miles, Limited, Gloucester, and Duramin Engineering Co., Limited. The vehicles will also have special easy-entrance cabs, to accommodate which the chassis will have the twin-steered front axles set further to the rear than normal. Powered by 125-h.p. Leyland O600 diesel engines, the chassis will be equipped with power steering and double-drive two-axle rear bogies, with a third differential incorporating a locking device controlled from the cab.

Transit Sheds At Hull Docks

British Transport Docks has placed a contract for the construction of two single-storey transit sheds at No. 12 Quay, King George Dock, Hull. The new sheds, which are each 500 ft. long by 150 ft. wide, with associated works to improve rail and road facilities, will complete the modernisation of this quay, which has recently been reconstructed in concrete. The main contract for the construction of the sheds and for the associated rail and road works has been awarded to A. Monk and Co.,

Limited, Warrington, and steelwork will be provided and erected by the South Durham Steel and Iron Co., Limited, Middlesbrough.

Scottish Region Contracts

The following contracts have been placed by the Scottish Region of British Railways:
Angus M. MacDougall and Co., Limited, Glasgow, for signal-boxes and yard buildings at Sighthill new goods depot, Glasgow.
Whitings, Limited, Glasgow, for construction of underpass and culvert at East Kilbride.
The Westinghouse Brake and Signal Co., Limited, London, for automatic warning system, Cathcart Circle, Glasgow Central and Newton.

Diesel Welding Equipment for Borneo

Perkins-powered welding equipment will play an important role in the construction of an £18 million 160-mile pipeline from Tandjung oilfields in the Indonesian part of Borneo to the coast of Balikpapan. Construction is being undertaken by Williams Bros. Constructors John Brown, Limited, using 31 Lincoln Electric SAE 300 welders powered by Perkins P6 diesel engines.

Decca True Motion Radar

Instructions have been placed with Decca Radar, Limited, for the installation of its most advanced True Motion radar Type TM909 by the Compagnie des Messageries Maritimes in four new cargo vessels, *Vosges*, *Ventoux*, *Vanoise* and *Vercors*, under construction in France. This owner has Decca radar fitted in 18 existing vessels, of which seven are equipped with True Motion radars.

British International Harvester Sales

At the end of the first quarter of the company's fiscal year, International Harvester of Great Britain reported that sales were 56 per cent ahead of the same period last year. Most of this advance was accounted for by greatly increased export sales of both of the company's main product groups. Crawler tractors and construction equipment were overall 70 per cent ahead of the same period of the record 1959 year, while the export figures for crawler tractors alone show a 200 per cent gain—a remarkable advance for a company that can claim to have been Britain's leading crawler tractor manufacturer for several years. Exports of farm tractors and farm equipment were impressive, with sales more than double those of 12 months ago.

London Midland Region Contracts

The London Midland Region of British Railways announces the following contracts:

The Butterley Co., Limited, Butterley, for supply and fabrication of steelwork for two bridges on the Acton and Bacup branches, for two bridges on the Hampstead Junction line, for the superstructure of new bridge over canal at the new freight terminal, Stoke-on-Trent, and for one bridge on the Trent Valley Line.

Leonard Fairclough, Limited, Adlington, for the new freight terminal at Watford Junction, construction of new bridge on Market Drayton Branch over the Birmingham-Preston Motorway (for the Ministry of Transport), for reconstruction of bridge between Speke Junction and Edge Hill, Liverpool (to accommodate the widening of Smithdown Road for the Corporation of Liverpool), for reconstruction of booking hall substructure at Ditton Junction and reconstruction and widening of adjoining bridge, and for reconstruction of bridge on Timperley and Garston Line (to accommodate widening of Woodland Avenue for the Corporation of Liverpool).

SHIPPING AND SHIPBUILDING

Improvements at Grangemouth

WORK is about to commence on a major scheme which has been approved by the British Transport Commission for improvements at Grange Dock, Grangemouth, at an estimated cost of £1,700,000. Grange Dock, constructed in 1906, has a water area of 30 acres, and is the largest of the four docks at the port. It is connected with the River Forth by a water channel and an entrance lock, 626 ft. in length and 80 ft. in width, through which vessels drawing up to 25½ ft. are able to enter and leave on all tides. Within the last year or two, considerable improvements have been effected in the Dock. The North Quay, 1,900 ft. in length, has been repaved in concrete, twelve new 6—3-ton electric cranes have replaced outmoded hydraulic appliances and a new transit shed, 400 ft. in length and 60 ft. in width, was recently opened. On the East Quay, 700 ft. long, which serves mainly for the discharging of bulk dry cargoes, three new 10-ton electric grab cranes are in service, a fourth is on order and the quay is being resurfaced in concrete. The three remaining quays now to be treated are the South Quay, and the north and south sides of the Tongue, a projection 250 ft. in width and 1,200 ft. in length at the western end of the dock.

On the Tongue two existing transit sheds will be supplemented by two new single-storey sheds, 400 and 500 ft. in length respectively, and 60 ft. wide. Fourteen new level-luffing electric cranes with a radius of 65 ft., will be provided so that each of the quays will be equipped with six 6—3-ton and one 10—3-ton cranes. The South Quay is at present used partly for the loading of coal and partly for general cargo purposes. The severe reduction in coal shipments has made it possible to remove the four coal hoists and to concentrate the remaining traffic in another dock at the port. The section of the quay available for general cargo will be extended from 1,200 to 1,800 ft. and on this length crane and railway tracks will be renewed, the quay surface repaved in concrete and eight new level-luffing electric cranes provided, each with an outreach of 65 ft., four of 6—3-ton for general purposes, and four of 7½—4-ton capable of dealing with general cargoes or for discharging bulk dry cargoes by grab. These improvements to Grange Dock will meet the requirements of the ocean trades which have been steadily developing at Grangemouth for several years.

To be Built at a Loss

AN example of a current trend in U.K. orders is the announcement last week by Bartram and Sons, Limited, Sunderland, that it has accepted orders for two ships which will be built at a loss. One is a 9,000-ton cargo liner for Buries Markes, Limited, London, and the other a cargo vessel of 12,600 tons for Australind Steam Shipping Co., Limited, also of London. The machinery for the two ships will be supplied by the North Eastern Marine Engineering Co., Limited, Wallsend-on-Tyne. Bartram also announces that a contract for undisclosed owners has been brought forward on

its order book and that all three ships will be delivered next year. The new contracts have been obtained in the face of the most intense competition. The company says, "In order to obtain these orders we had to cut our prices to such a level that it is probable that the vessels will be built at a loss."

Barry for Bananas

BARRY is to become an important banana port following the decision of Geest Industries, Limited, to import the major part of its trade, 50,000-80,000 tons per annum, through that port. The Industrial Association of Wales and Monmouthshire welcomes the initiative of British Transport Docks in securing this additional trade. The B.T.C. is also encouraging car exports to South Wales by providing new covered accommodation.

RAILWAY PAY REPORT

(Continued from page 3)

For these groups we suggest that a differential of much less than 5 per cent (and 10 per cent in the case of stationmasters in special classes A and B), over and above any general increase, would be unlikely to meet the case. In Part IV of our report we deal also with London allowances. On the basis of comparison with other industries, and allowing for the cheap and free travel facilities available to railway employees, we consider there are good grounds for increasing the London allowance of railway employees to £20 a year for adult salaried staff and to 6s. a week for conciliation staff.

Other Matters

Finally, we make certain further observations in Part V in regard to three general matters. First, we suggest that the parties should consider the desirability of separating, at the level of the Railway Staff National Council, the machinery of negotiation for salaried staff from that of the conciliation grades. Secondly, we make some comments upon the standard of amenities and welfare facilities provided for railway employees, which we consider to be below the standards in most other industries. Thirdly, we submit to the parties certain suggestions made by our investigation officers concerning some of the clerical procedures in the railways.

The members of the committee pay a tribute to the services of the secretary, Mr. H. A. Whitson. "Had it not been for his outstanding qualities and the self-sacrificing devotion with which he has carried out all his duties, we would not have been in a position to present our report until much later," it is stated. "We wish also to express our deep appreciation of the assistance we have received from Mr. A. T. Raby, who was our assistant secretary until November, 1959, and from Mr. H. Slater, who has acted in the same capacity since the resignation of Mr. Raby."

TYER

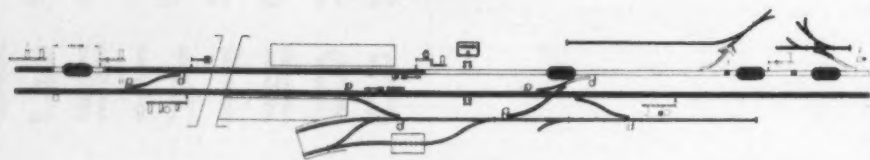
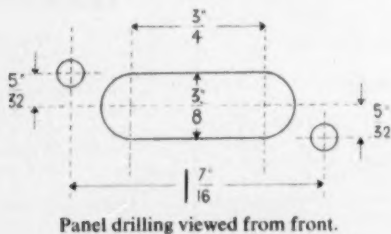


DIAGRAM LAMP UNIT

The Unit consists of:

- A translucent indicating cap usually white or red, to suit the diagram or control panel. When fitted to a 3/16" thick panel the front surface of the cap is flush with the diagram.
- Two identical shaped base mouldings, clamped by a 6 B.A. screw and nut.
- Two identical nickel silver contact springs, trapped between the two mouldings. These make contact with two P.O. type lamps.
- The back cover encloses the rear of the clamped base unit, is readily removable without disturbing member units or wiring.



Panel drilling viewed from front.

Type P.5/1
standard unit with 6 B.A. c/sk screw and nut.

Type P.5/2
the unit with 6 B.A. Ch/Hd screw and special tapped insert for panel.

Notes:

- Colour of indicating cap to be specified.
- P.O. type lamps are separate to the unit.
- Alternative cap designs and colours are available.

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Special
Articles



Enlarged
Issue

VOL. LXXXIII No. 2131

[Registered at the G.P.O.
as a newspaper]

LONDON, MARCH 19, 1960

PRICE ONE SHILLING

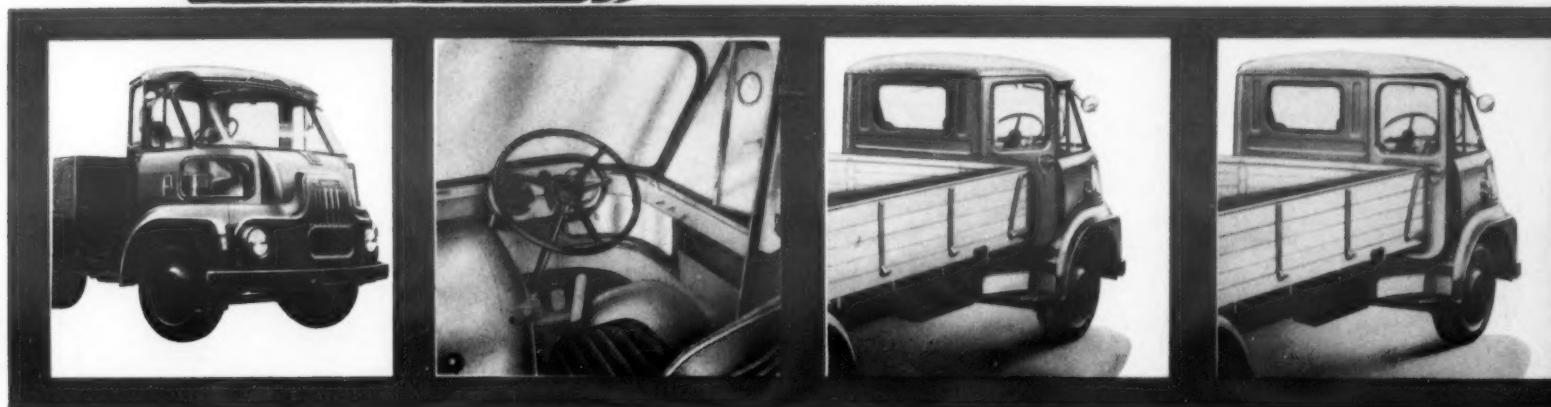
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A repeat order for 18 of these M.C.W. front entrance double-deck bodies, now being delivered, carries the total to well over 200 M.C.W. bodies for Lisbon Tramways.



Madrid Municipality have now ordered 120 of these M.C.W. single-deck three door bodies. Some 225 M.C.W. bodies of all types have been or are being supplied to this undertaking.

Recent export orders have been received from:

CUBA for Omnibus Metropolitanos, S.A. of Havana—200 Olympics Series 2 equipped with Leyland Worldmaster running units.

GHANA for 150 single-deck bus bodies to be mounted on Leyland Worldmaster chassis.

Also from ANGOLA, CEYLON, COSTA-RICA, TRINIDAD and TURKEY



Repeat orders for 33 Leyland M.C.W. Olympics Series 2 for Jamaica Omnibus Company, raise to approximately 200 the number of M.C.W. bodies for this operator.



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AP206

KEEPING TRAINS MOVING — IN AFRICA



Westinghouse Electro-Vacuum Braking is fitted on the 400 coaches now running on the Cape Western Electrification (see above) and on the 349 coaches of the Reef Electrification. Air, Air/Vacuum and Vacuum Brake Equipment from the Westinghouse factories is extensively used all over the continent of Africa, on passenger and freight stock, steam, electric and diesel locomotives.

WESTINGHOUSE

BRAKES AND SIGNALS

are co-operating in railway modernisation all over the world, and notably in Africa.

Bloemfontein, Cape Town and Pretoria are examples of modern methods of power signalling. The former, opened in 1958, includes a power frame of 147 levers (see below), the two latter now under construction will be route relay interlockings of considerable magnitude.

Westinghouse C.T.C. is now operating on Rhodesian Railways and Westinghouse Power, Mechanical and Double Wire Signalling has been supplied to East Africa, Ghana and Nigerian Railways.



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